

RECORD OF DECISION

ST. REGIS PAPER COMPANY SUPERFUND SITE

SOIL REMEDY FOR OPERABLE UNIT 7

CASS COUNTY, MINNESOTA



U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 5

CHICAGO, ILLINOIS

April 2020

**KURT
THIEDE**

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KURT THIEDE
Date: 2020.04.02
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Kurt A. Thiede
Regional Administrator

Date

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Attachments

Attachment A: ARARs and Standards To Be Considered

Attachment B: Tribal and State Response Letters

Attachment C: Administrative Record Index

List of Acronyms

| | |
|--------------|---|
| % | Percent |
| AOC | Administrative Order on Consent |
| ARAR | Applicable or Relevant and Appropriate Requirement |
| ATSDR | Agency for Toxic Substances and Disease Registry |
| BNSF | BNSF Railway Company |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| Champion | Champion International Corporation |
| COC | Chemical of concern |
| COPC | Chemical of potential concern |
| COPEC | Chemical of potential ecological concern |
| CSM | Conceptual site model |
| CTE | Central tendency exposure |
| DDD | Dichlorodiphenyldichloroethane |
| DDE | Dichlorodiphenyldichloroethene |
| DDT | Dichlorodiphenyltrichloroethane |
| DDx | DDT and metabolites |
| DRM | Division of Resource Management |
| ELCR | Excess Lifetime Cancer Risk |
| EPA | U.S. Environmental Protection Agency |
| EPC | Exposure point concentration |
| ERA | Ecological risk assessment |
| FS | Feasibility Study |
| HHERA | Human health and ecological risk assessment |
| HHRA | Human health risk assessment |
| HI | Hazard index |
| HPAH | High molecular weight PAHs |
| HQ | Hazard quotient |
| HSCA | Hazardous Substances Control Act |
| IC | Institutional Control |
| IP | International Paper Company |
| IRIS | Integrated Risk Information System |
| LLBO | Leech Lake Band of Ojibwe |
| LOAEC | Lowest observed adverse effect concentration |
| LOAEL | Lowest observed adverse effect level |
| LPAH | Low molecular weight PAHs |
| MDNR | Minnesota Department of Natural Resources |
| mg/kg | Milligram per kilogram |
| mg/kg-day | Milligram per kilogram per day |
| mg/kg bd-day | Milligram per kilogram of body weight per day |
| MPCA | Minnesota Pollution Control Agency |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan |
| ng | Nanogram |
| ng/kg | Nanogram per kilogram |
| ng/L | Nanogram per liter |
| NHP | Natural Heritage Program |

| | |
|-----------------|--|
| NOAEC | No observed adverse effect concentration |
| NOAEL | No observed adverse effect level |
| O&M | Operation and maintenance |
| OU | Operable Unit |
| PAH | Polycyclic aromatic hydrocarbon |
| PCP | Pentachlorophenol |
| ppm | Parts per million |
| ppt | Parts per trillion |
| RCRA | Resource Conservation and Recovery Act |
| RfC | Reference concentration |
| RfD | Reference dose |
| RME | Reasonable maximum exposure |
| ROD | Record of Decision |
| SF | Slope factor |
| TEF | Toxic equivalency factors |
| TEQdf | Toxic equivalent concentration of dioxins and furans |
| TCDD | 2,3,7,8-Tetrachlorodibenzo-p-dioxin |
| TRV | Toxicity reference value |
| UAO | Unilateral Administrative Order |
| URF | Unit risk factor |
| USFWS | U.S. Fish and Wildlife Service |
| yd ³ | Cubic yards |

PART I DECLARATION

This section summarizes the information presented in this Record of Decision (ROD) and includes the authorizing signature of the U.S. Environmental Protection Agency (EPA) Region 5 Regional Administrator.

Site Name and Location

St. Regis Paper Company Superfund Site
Cass Lake, Minnesota; Cass County

Superfund Identification Number: MND 057597940

Statement of Basis and Purpose

This ROD presents the selected remedial action for contaminated soil in Operable Unit (OU) 7 of the St. Regis Paper Company Superfund Site ("site", "St. Regis site"). OU7 consists of the residential properties within the site boundary and adjacent to the former operations area. This remedial action was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 USC §§9601 et seq., as amended by the Superfund Amendments, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, as amended. The Regional Administrator of Region 5 has been delegated the authority to approve this ROD.

This decision is based on the Administrative Record (AR) file for the site, which has been developed in accordance with Section 113(k) of CERCLA, 42 USC §9613(k), which is available for review at the EPA Region 5 Records Center, 77 West Jackson Boulevard, Chicago, Illinois, and at the following informational repositories:

Leech Lake Band of Ojibwe
Division of Resource Management
15756 State 371 NW
Cass Lake, Minnesota 56633

Cass Lake City Clerk
332 Second Street NW
Cass Lake, Minnesota 56633

Cass Lake Public Library
223 Cedar Avenue
Cass Lake, Minnesota 56633

The Administrative Record Index (Appendix C to the ROD) identifies each of the items comprising the Administrative Record upon which the selection of the remedial action is based.

Assessment of the Site

The response action selected in this ROD is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

Description of the Selected Remedy

The ROD sets forth the final remedy for OU7 soil at the St. Regis site. Future remedial actions will address exposure to contaminated soil in OU1, OU2 and OU3, utility or construction worker exposure to contaminated groundwater in OU1, ecological exposure to soil contamination in OU2, and a groundwater plume in OU2.

The selected remedy in OU7 will address potential exposure to contaminated soil in OU7 by removing that soil from residential properties and burying it below a clean cover on PRP-owned property. The selected OU7 remedy includes the following components:

1. Excavation of contaminated soil that exceeds Level 1 Preliminary Remedial Goals (Level 1 PRGs). The excavation will then be filled back to grade with clean soil fill and the properties will be re-vegetated.
2. Consolidation below grade in OU1 or OU2 of excavated soil that does not pose a leaching threat. The contaminated soil will be covered by a geotextile marker, clean fill, and topsoil, and then revegetated.
3. Institutional Controls (ICs): Placement of ICs on the area of consolidated soil in order to maintain the protectiveness of the cover and prevent unauthorized excavation.
4. Five-Year Reviews: There will be five-year reviews of the remedy's protectiveness and performance pursuant to CERCLA 121.

Statutory Determinations

The selected remedy is protective of human health and the environment, complies with Federal, Tribal, and State requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

The statutory preference for treatment of principal threats does not apply because there is no known principal threat waste in OU7 soils above the water table. Previous response actions to groundwater contamination still address the remaining principal threat wastes at and below the water table (e.g. installation of the groundwater pump and treat system and monitoring system).

The remedy will result in no hazardous substances remaining in OU7 above levels that allow for unlimited use and unrestricted exposure. Because the remedy will result in hazardous substances remaining on-site in another OU, at least temporarily, above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years after initiation

of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

ROD Data Certification Checklist

The following information is included in the Decision Summary section (Part II) of this ROD. Additional information can be found in the Administrative Record file for this site.

- Chemicals of concern (COCs) and their respective concentrations (Section 6.3);
- Baseline risk represented by the COCs (Section 8.1.4);
- Cleanup levels established for COCs and the basis for the levels (Sections 9.1 and 11.2);
- Assumptions (primarily related to soil exposures) in the baseline risk assessment and the ROD (Sections 8.1.2, 8.1.3, and 8.1.4);
- Current and reasonably anticipated future land use assumptions used in the baseline risk assessment and ROD (Section 7);
- Potential land use that will be available in OU7 as a result of the selected remedy (Section 13.4);
- Estimated capital, operation and maintenance (O&M), and total present worth costs; discount rate; and the number of years over which the remedy cost estimates are projected (Section 13.3); and
- Key factor(s) that led to selecting the remedy (Section 11).

Support Agency Acceptance

The Leech Lake Band of Ojibwe (LLBO) has reviewed the Supplemental Feasibility Study (FS) Report and EPA's Proposed Plan and has indicated that it objects to the selection of Alternative S15-B because it does not include removing all excavated soil to a location outside the Leech Lake Reservation, it does not adopt the LLBO Hazardous Substances Control Act (HSCA) dioxin cleanup level as an applicable or appropriate and relevant requirement (ARAR), and because LLBO believes EPA should enter into a cooperative enforcement agreement with LLBO. Additional description of LLBO's involvement in the development of the ROD and LLBO's positions is found in Part II, Section 11.9, and in Part III of this ROD.

The Minnesota Pollution Control Agency (MPCA) has reviewed the Supplemental FS Report and EPA's Proposed Plan, and has indicated that it concurs with the selected remedy for the site, conditional upon steps to prevent and/or monitor recontamination of OU7 properties from adjacent OUs. Those steps include implementing a soil remediation in adjacent OUs in a timely

fashion, and sampling after the remedy is complete to monitor potential recontamination and develop the remedial design for implementing the remedy.

Authorizing Signature

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KURT THIEDE
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Kurt A. Thiede
Regional Administrator

Date

PART II DECISION SUMMARY

1 Site Name, Location, and Description

Name: St. Regis Paper Company Superfund Site

Location: Within the exterior boundaries of the LLBO Reservation in the City of Cass Lake, Cass County, Minnesota.

National Superfund identification number: MND057597940

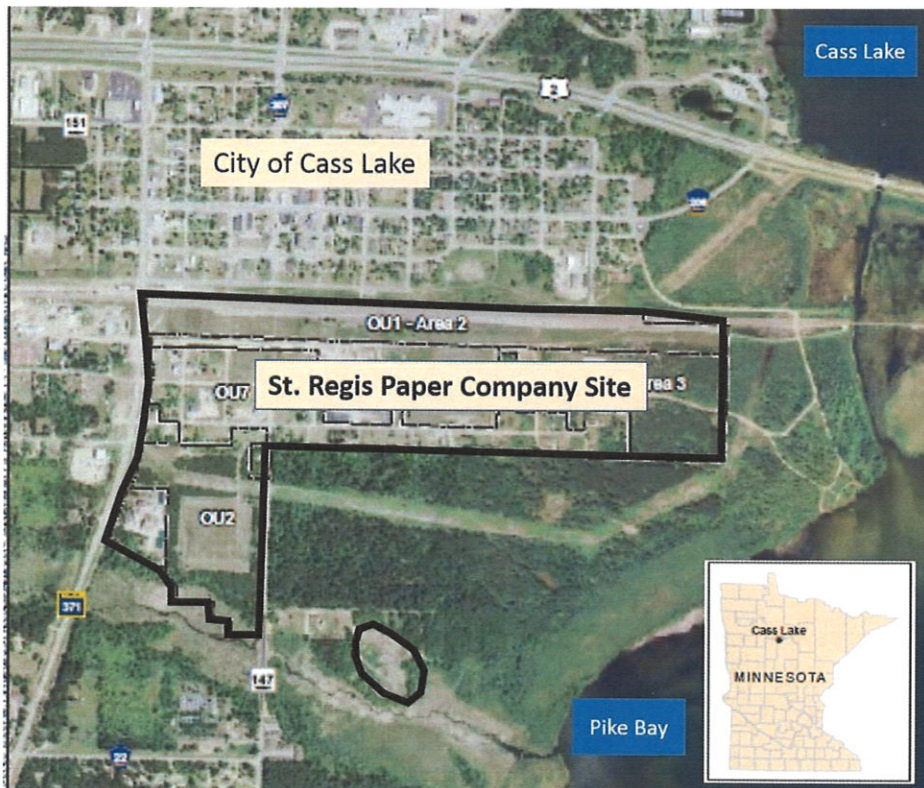
Source of cleanup monies: Potentially Responsible Parties

2 Site History and Enforcement Activities

2.1 Site History

The former operations area of the site is primarily on approximately 125 acres of property south of the BNSF Railway Company (BNSF) tracks, and east of Highway 371, and was used as a wood treatment facility from about 1958 until 1985. The site includes residential properties near the former operations area and areas of site-related contamination within and adjacent to the City of Cass Lake's former municipal dump which is located south of a portion of the Chippewa National Forest, east of County Road 147, and north of Fox Creek (Figure 1).

Figure 1: The St. Regis Paper Company Superfund Site



The wood treating process at the site consisted primarily of pressure treating wood with creosote, pentachlorophenol (PCP) and ammoniacal copper arsenate. Wastewater from wood treating was placed in ponds on the site between about 1958 and 1980. This wastewater was also used occasionally to spray grass near the ponds and other areas of the site. After 1980, site wastewater was reused, evaporated in tanks, or disposed in a sewage drain located in Chippewa National Forest that led to the City of Cass Lake sewage treatment tank near the City Dump. Sludge from wood treatment was disposed of on the eastern edge of the site and in a waste pit near the Cass Lake City Dump. Sludges and waste oil from the site were occasionally burned in that waste pit. Wood preserving operations ceased in the fall of 1985.

2.2 Federal and State Investigations, Removals, and Remedial Actions

2.2.1 Actions under MPCA Oversight

In 1984, the site was listed on the EPA National Priorities List. Under MPCA oversight, in 1985, the PRP, Champion International Corporation (Champion), completed a Remedial Investigation and Feasibility Study (RI/FS) that identified an estimated 22,000 cubic yards (yd³) of contaminated soil and 4,000 yd³ of sludge at the site. It also found groundwater contamination in OU1 and OU3. The RI/FS identified PCP, dioxin, and polycyclic aromatic hydrocarbons (PAHs) as COCs that pose potential risks to human health and/or the environment.

In March 1986, MPCA signed two Minnesota Enforcement Decision Documents for clean-up of OU1, OU2, and OU3 based on results of the FS. The Remedial Action goals and objectives were to:

- 1) adequately protect the public against exposure to PCP, PAHs, and dioxin/furans through direct contact or ingestion of ground water from private and public water wells;
- 2) adequately protect the public against exposure to PCP, PAH, and dioxin/furans released to the surface water from the groundwater; and
- 3) adequately protect and minimize damage to the environment from the migration of PAH and dioxin/furans in the groundwater.

The remedial alternative chosen by the state included:

- 1) excavation of sludges and contaminated soil from the site and securing them in an on-site Resource Conservation and Recovery Act (RCRA)-approved contaminated soil containment vault;
- 2) extension of the municipal water supply system to residents in the OU7 area;
- 3) installation of a groundwater pump-out and groundwater monitoring system; and
- 4) long-term operation, maintenance and monitoring of the groundwater pump-out system, monitoring system, and vault.

Long-term O&M of the vault, pump-out system and the approximately 40 monitoring wells was to be conducted until the groundwater contamination was reduced to below the state Response Action Levels of 1.01 milligram per liter for PCP, 28 nanograms per liter (ng/L) for carcinogenic PAHs, and 300 ng/L for non-carcinogenic PAHs.

PRP Champion (later purchased by International Paper (IP)) performed Remedial Actions from 1985 to 1988. The work included: (1) excavating over 40,000 yd³ of visibly contaminated soil and the sludge from excavated ponds and the city dump pit, and placing the material in a newly constructed on-site RCRA-standard hazardous waste cell, commonly referred to as the “containment vault”; (2) installing contaminated groundwater extraction wells at OU1 and OU3 and a groundwater treatment system; (3) long-term O&M of the groundwater extraction and treatment system; (4) long-term O&M of the containment vault; and (5) long-term monitoring of the groundwater.

2.2.2 Actions under EPA Oversight

In 1995, EPA became the lead agency for the St. Regis site. The extraction system put in place in the late 1980s continues to treat groundwater contamination. During the 2000 Five-Year Review, concerns were raised about possible remaining soil contamination. EPA conducted additional sampling, including soil sampling, in 2001. EPA concluded that OU1 and OU2 needed to be further evaluated for possible additional soil removal. Based on soil sampling results that exceeded EPA’s 1998 Dioxin Policy standards, in 2003 EPA ordered PRP IP to sample (and then to excavate) shallow soil on the City-owned properties above 1,000 parts per trillion (ppt) dioxin. Through a 2005 Administrative Order on Consent (AOC) with EPA, PRP BNSF excavated shallow soil on its property that was above 5,000 ppt and covered, fenced and vegetated areas above 1,000 ppt dioxin. PRP IP also capped with fabric and gravel or fenced two areas of contaminated soil on (then) PRP Cass Forest Products’ property with dioxin levels greater than 1,000 ppt. In all, these cleanups resulted in excavation of more than 3,900 tons of contaminated soil from former operations areas. The soil was disposed of off-site.

Also based on the sampling that EPA performed or oversaw from 2001 to 2003, EPA ordered IP in 2004 to perform a Human Health and Ecological Risk Assessment (HHERA) to evaluate the site risks posed to residents, workers, and the environment. In 2004, samples of soil, sediment, surface water, house dust, groundwater, plants, and animals were collected and, together with earlier sample results, evaluated for potential risk. The HHERA results showed there was the potential for unacceptable human exposure to contaminated soil. In 2005, as an interim measure to protect the health of persons living near the site, EPA issued an interim ROD and ordered IP to clean the inside of nearby residences, apply a three-inch layer of clean soil and grass on yards, and apply dust suppressant to unpaved roads. In 2008, EPA and the PRPs entered into an AOC to conduct an FS to permanently address contaminated soil.

2.3 CERCLA Enforcement Activities

EPA has identified four responsible parties for the site; IP, BNSF, Cass Forest Products, and the City of Cass Lake; all of whom received special notice letters on April 28, 2008. EPA has entered into various Unilateral Administrative Orders (UAOs) and AOCs with some of the responsible parties. In addition, on November 29, 2010, EPA entered into Consent Decrees

(CDs) with PRPs BNSF and IP (for collection of past response costs through December 31, 2008), and an Ability to Pay (ATP) Consent Decree with Cass Forest Products (CFP). On February 12, 2018, EPA entered into an ATP Consent Decree with the City of Cass Lake. The ATP Consent Decrees with CFP and City of Cass Lake resolved their past and future liability at the site.

Significant enforcement activities include:

- 1995 UAO for site Operations and Maintenance
- 2003 UAO for Removal and Remedial sampling
- 2003 UAO for Removal actions for contaminated site soil
- 2004 UAO to conduct a HHERA
- 2005 AOC for Removal actions for contaminated site soil on BNSF property
- 2005 UAO to perform remedial actions outlined in an Interim ROD
- 2008 AOC to conduct a FS
- 2010 CD with BNSF and IP for past costs and ATP CD with CFP
- 2018 ATP Consent Decree with the City of Cass Lake

3 Community Participation

Throughout EPA's involvement in the site, EPA has kept the community and other interested parties apprised of site activities through fact sheets, press releases, and public meetings. In addition to multiple public meetings during the development of the FS, EPA held a public meeting and hearing on July 30, 2019 at the Cass Lake/Bena Elementary School in Cass Lake, Minnesota to present and receive comments on the 2019 Proposed Plan. The transcripts and the written comments received on the Proposed Plan, with personally-identifiable information redacted, are included in the Administrative Record for this ROD. EPA's responses to the comments received are included in Part III of this ROD, the Responsiveness Summary.

4 Tribal Participation

LLBO, both as EPA's support agency partner and as a sovereign tribal government, has been closely involved throughout the FS and remedy selection processes. EPA has supported and funded LLBO's participation since the late 1990s as a support agency partner in all aspects of site work, including removal actions, the interim remedial action in OU7, groundwater remedy activities, and the soil FS, through a Support Agency Cooperative Agreement. With respect to the soil FS, EPA has provided project documents to LLBO as a support agency partner, for its review and comment, including: the FS workplan; the Alternatives Screening Technical Memorandum; draft and revised FS Reports in 2009 and 2011, respectively; supplemental soil investigation systematic planning documents and reports from 2012-2013; draft and revised

Supplemental FS Reports in 2014-2015; draft Proposed Plans to address soil in 2011, 2015 and 2019, and draft RODs in 2016 and 2019. EPA has considered LLBO's comments in its evaluation of all PRP deliverables and development of EPA remedial alternatives and decision documents.

Additionally, EPA Region 5 and LLBO have engaged in government-to-government consultation numerous times to discuss specifically the OU7 soil remedy, or issues related to the soil remedy, including in February 2011, in June and July 2015, in April 2017, and in March 2019. EPA considered the concerns raised and provided letters acknowledging and responding to each concern after consultation.¹ In addition, EPA's Office of Land and Emergency Management engaged in government-to-government consultation at LLBO's request in October 2019. Part III of this ROD describes how these issues were considered and provides responses to them.

5 Scope and Role of Operable Units

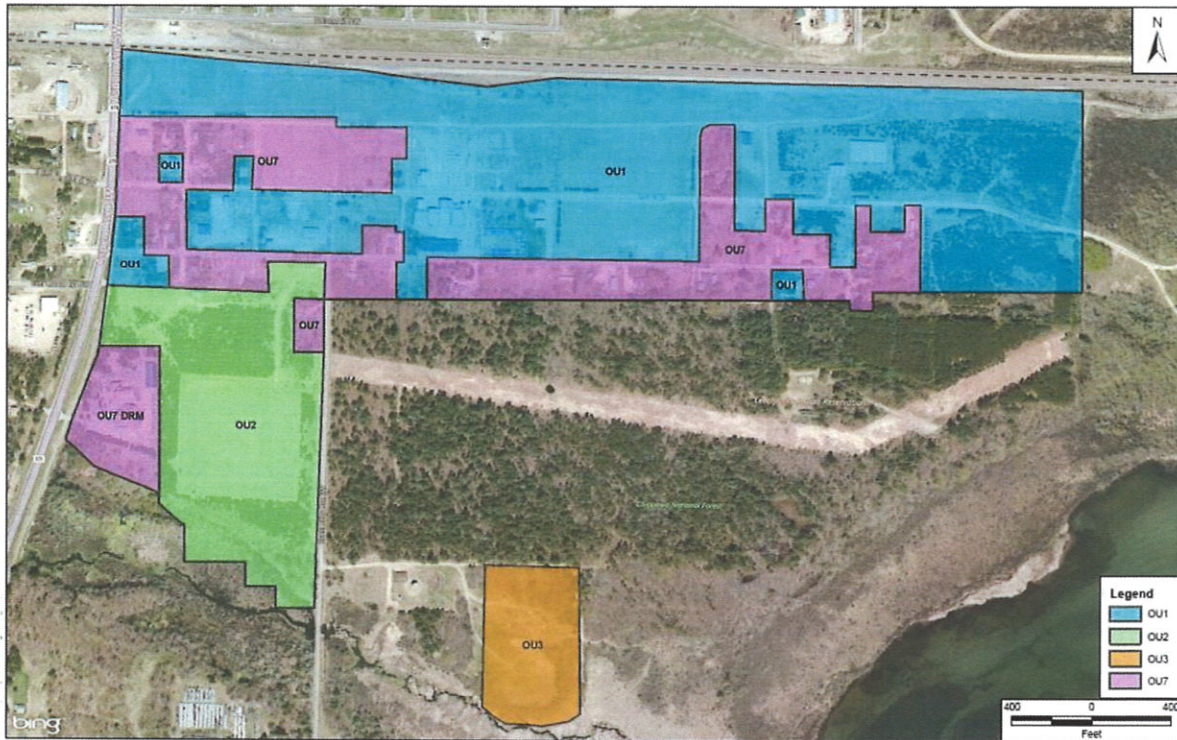
The site has been divided into four OUs (OUs 4, 5, and 6 are for administrative purposes only; see Figure 2).

- OU1 (approximately the blue areas in Figure 2) includes the main operations area where pressure treating took place, waste sludge was held, and treated wood was stored. OU1 is currently owned by the site responsible parties: IP, who acquired Champion; BNSF; the City of Cass Lake; and Cass Forest Products. OU1 also includes adjacent commercial properties that may or may not have been used in wood treating operations.
- OU2 (approximately the green area in Figure 2) is a former wood storage area located southwest of the main operations area and is the site of the RCRA Subtitle C vault containing contaminated soils and sludges from the site. IP is the sole owner of OU2.
- OU3 (approximately the orange area in Figure 2) is that portion of the former City of Cass Lake municipal dump where waste sludge and waste water was disposed and burned. OU3 is owned by the City of Cass Lake.
- OU7 (approximately the purple area in Figure 2) is composed of residential properties adjacent to the site, as well as the LLBO Division of Resource Management (DRM) property to west of OU2.

This ROD addresses exposures to soils in all of OU7 through direct contact and accidental ingestion and inhalation. Groundwater is not addressed because remediation of contaminated groundwater in OU1 and OU3 and maintenance of the RCRA vault in OU2 are being performed under a 1995 UAO issued to Champion, the corporate predecessor of IP. Soil contamination above the water table that may be acting as a source for groundwater contamination in OU2 will be addressed in a separate remedial action subsequent to the one described in this ROD.

¹ See the following documents listed in the Administrative Record Index in Attachment C of this ROD: 405143, 926111, 935783, and 947607.

Figure 2: St. Regis Paper Company Site Operable Units



6 Site Characteristics

6.1 Regional and Site Topography and Geology

The site is located in an area of glacial moraines and outwash plains that created a gently rolling terrain intermixed with low-lying bogs and lakes. Pike Bay and the channel connecting it to the more northern Cass Lake, part of the Mississippi chain of lakes, lie directly east of the site. Fox Creek, a small tributary that discharges into Pike Bay, flows east-southeast south of OU2 and OU3.

The four glacial units that underlie the site are, in descending order: 1) an upper glacial outwash, 2) an upper till, 3) a lower glaciofluvial outwash, and 4) a lower till. The total thickness of the unconsolidated glacial sediments in the general area is reported to be about 400 feet. The two outwash layers are prolific aquifers. The sub-cropping bedrock is likely Pre-Cambrian crystalline granites, greenstones, and schists and is not a water supply source.

The upper outwash unit consists of fine- to medium-grained well sorted sand that ranges in thickness from 40 to 60 feet, with little or no topsoil development. The water table and site-related groundwater contamination are within this unit. In the eastern part of OU1, the natural surficial material is comprised of peat and silty clay wetland deposits that thicken near the channel and thin further east. In areas south and east of the former city dump and disposal pit in OU3, the natural surficial material is also comprised of bog and wetland deposits.

Underlying the upper outwash is a dense silty clay till which appears to be consistently present in OU1, is variable to absent in OU2, and is absent in portions of OU3. A 20- to 50-foot-thick lower outwash comprised of medium sands to coarse gravels underlies the upper till. The lowermost unit encountered as a part of site investigations is another clayey glacial till, of indeterminate thickness, with interbedded coarse sand and gravel.

6.2 Regional and Site Hydrology

The topography in the OU1 area has little relief and, although the surficial soils are largely sandy, surface water ponds in several areas of the site in the spring and after heavy rainfalls. The water table is fairly shallow, usually between 5 and 25 feet below ground surface.

Groundwater flow in the upper outwash aquifer is generally to the east towards Cass Lake/Pike Bay. At OU3 the upper outwash groundwater flow is also affected by the Fox Creek valley and is generally to the east-to-southeast. Groundwater flow in the lower aquifer generally mimics flow in the upper aquifer, although its responses to upper aquifer stresses is muted.

Groundwater contamination at the site remains at OU1 and OU3 and continues to be treated by the extraction system that began operating in January 1987. A total of 13 pump-out wells (at the time of writing) make up the extraction system, 10 in OU1 and three in OU3. As of the end of the 2018 calendar year, an estimated 15,543 kg of PCP and 8,157 kg of PAHs have been removed from groundwater by the treatment system. As described in the 2015 Five-Year Review Report, contaminant concentrations in OU1 and OU3 groundwater are significantly less than they were prior to implementing the remedial action. However, the report also noted that modifications to the extraction network were needed to ensure capture of the contaminant plumes.

6.3 Nature and Extent of Soil Contamination

In OU7, soil samples were generally collected at intervals between 0 and 4 feet below ground surface. Two locations now considered to be in OU7 but previously considered in OU1 were sampled to a greater depth (five feet and eight feet). As shown in Table 1², OU7 dioxin concentrations (calculated as a toxic equivalent concentration of dioxins and furans (TEQdf) in accordance with the World Health Organization's 2005 toxic equivalency factors (TEFs)) range from below the average background level of about 7.5 ppt to 2,550 ppt. B(a)PE values on residential properties are generally at or below background levels, with the property having 11.7 parts per million (ppm) being the lone exception.

Dioxin was an impurity in the PCP that was used at the St. Regis site. Dioxin has been shown to be very toxic in animal studies and, in humans, causes effects on the skin and probably causes cancer. PAHs are a group of chemicals formed during the incomplete burning of coal, oil, gasoline, wood, garbage, or any plant or animal material. It is found in cigarette smoke, soot, and creosote. Animal studies show some PAHs caused birth defects and decreased body weight. In humans, breathing or long periods of skin contact to mixtures that contain PAHs can cause

² For the dataset that was used to determine the values in Table 1, see document #949477 in the administrative record index in Appendix C.

cancer. EPA's evaluations further identified high molecular weight PAHs (HPAHs) and benzo(a)pyrene equivalent B(a)PE, which are groups of PAHs. HPAHs are a useful combination of PAHs for determining ecological risk. B(a)PE is a group of PAHs used to determine human health risk.

Table 1: Concentrations of COCs in Soil

| Chemical | Depth Range, feet | Concentration | | | Units | Background |
|-------------------------|-------------------|---------------|---------|--------|-------|------------|
| | | Minimum | Maximum | Median | | |
| Dioxin [TEQdf (WHO-05)] | 0-1 | 6.56 | 537 | 34 | ppt | 7.5 |
| | >1 | 0.13 | 2550 | 0.87 | | |
| B(a)PE | 0-1 | 0.0011 | 11.7 | 0.239 | ppm | 1.6 |
| | >1 | 0.001 | 2.9 | 0.003 | | |

Many of the properties in OU7 were not part of the former wood treating operations, and received contaminated dust, soot, ash and fine soil that was blown, tracked or washed on to the surface. These properties generally have contamination above the background level only within the top 12 inches. However, other properties in OU7 were used by the wood treater for storage of treated wood, and there may be thin layers of more highly-contaminated soil in areas of the former wood-treating facility due to the dripping of creosote and/or PCP directly into the soil. This soil could leach mobile contaminants (PCP, naphthalene) to groundwater if left in place or consolidated in an unlined cell. In the event such soils are encountered, the alternatives contemplate either transportation off-site to a RCRA Subtitle D facility for non-hazardous waste or to a Subtitle C facility for any such hazardous waste.

6.4 Conceptual Site Model

The human health conceptual site model (CSM; Figure 3 and Figure 4) is based on the setting and history of the site and an analysis of chemical- and site-specific release and transport mechanisms, as well as local land use, demographics, and regional climate. The CSM describes the contaminant sources and transport mechanisms, potential exposure media and routes of exposure (i.e., inhalation, ingestion, skin contact), and populations of concern under both current and future land use conditions. These CSM elements are combined to develop exposure scenarios.

For purposes of the CSM and the 2011 HHERA, the site and surrounding areas are grouped into two Areas:

- Area A: Area A includes OU1 (the former operating area, the north storage area, and contiguous lands owned by the City of Cass Lake and BNSF), most of OU7 (the residences in the area bordered by the railroad to the north, Highway 371 to the west, 3rd Street to the south), the forested wetland, and the channel connecting Cass Lake and Pike Bay to the east. Area A also includes the residential property located at 316 Grant Utley Avenue SW, bordering the northeast corner of the southwest area. Commercial/industrial and residential exposure scenarios are considered in Area A.

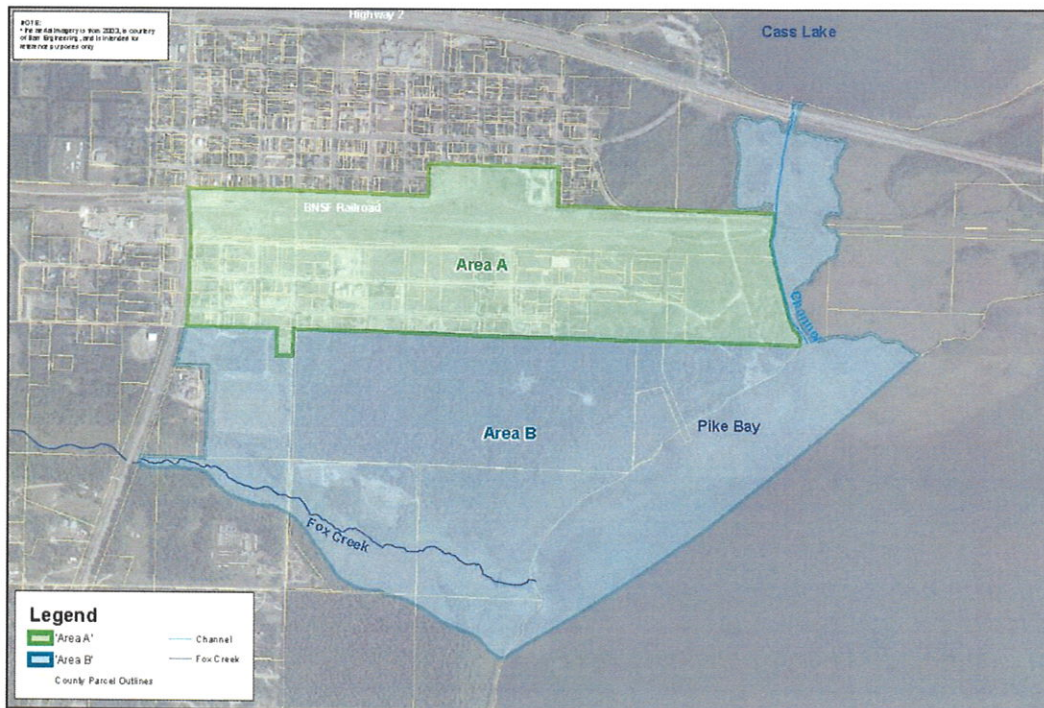
- Area B: Area B consists of the mostly undeveloped, forested and wetland areas in and adjacent to the site. Area B includes OU2 (the southwest area of the former wood-treating facility property, including the containment vault and former wood storage area), OU3 (the City of Cass Lake dump area), the former City of Cass Lake wastewater treatment plant, a portion of the Chippewa National Forest, contiguous state- and city-owned property, Fox Creek, the Pike Bay shoreline, and the channel that connects Pike Bay and Cass Lake. These areas are where persons may go to gather food or medicinal plants, and to engage in cultural and spiritual pursuits. This is also where ecological exposures to site contaminants may occur.

The remedial action described in this ROD addresses exposures to contaminated soil. Therefore, this section describes only those exposures, hazards, and risks relevant to this remedial action.

6.4.1 Contaminant sources and transport

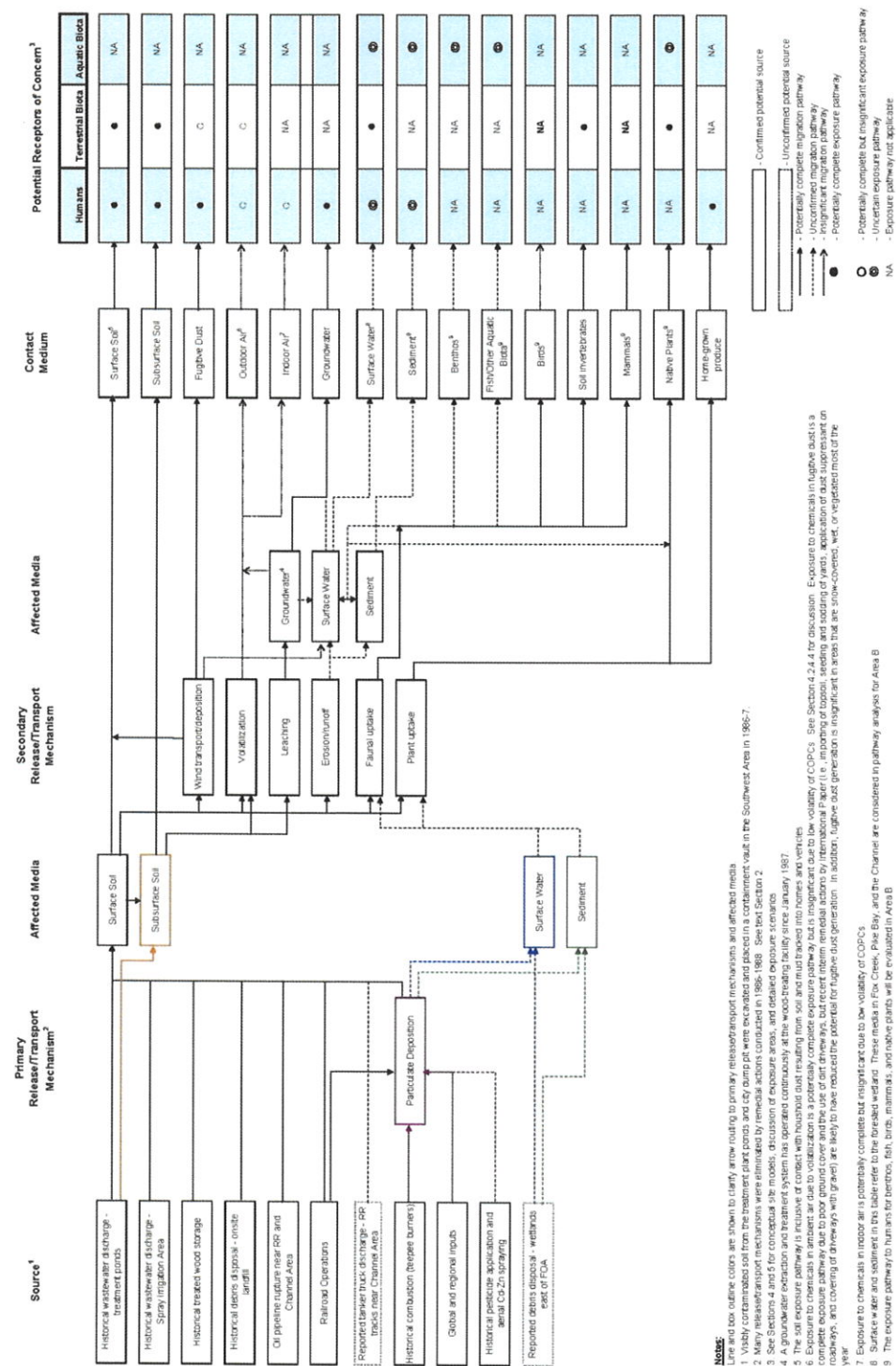
As shown in Figure 4, the sources of contamination in Area A include former treated wood storage, a spray irrigation area, former teepee burners (used for burning waste wood), and a former wastewater disposal pond. Contaminants in or from these areas were released and transported to other portions of the site including nearby residences through a variety of release and transport mechanisms including wind erosion and deposition, particulate emissions and deposition, surface water runoff, and infiltration and subsequent migration via groundwater.

Figure 3: Conceptual Site Model Areas³



³ HHERA Figure 1-6.

Figure 4: Human Health Conceptual Site Model⁴



⁴ HHERA Figure 3-1.

7 Current and Potential Future Land and Resource Uses

The site as a whole includes a mix of properties currently used for commercial/industrial and residential purposes as well as many vacant properties. The population of the City of Cass Lake has been declining for several decades; the estimated 2018 population (760 persons; 305 households) is 12 percent lower than the 2000 population (860 persons; 331 households), and 18 percent lower than the 1990 population (923 persons; 365 households).⁵ However, the City of Cass Lake is a population center for LLBO, which has expressed that there is a limited land base and shortage of housing for tribal members within the reservation. Given the many vacant properties in Cass Lake (both on the Superfund site and elsewhere in the city), EPA anticipates that future demands for both industrial/commercial and residential uses will be accommodated.

In determining whether a site property is considered residential for the purpose of inclusion in OU7, EPA considered both the City of Cass Lake's 2005 zoning map, and existing use. If, at the time the Supplemental FS Report was prepared, a property was vacant but zoned residential, or was currently in residential use, the Supplemental FS Report includes the property in OU7. Properties that are vacant and zoned commercial/industrial, or currently used for an existing business, were not included. Un-zoned properties owned by LLBO outside the city limits are currently in non-residential use, but there is the potential for converting them to residential use because of the demand for housing for LLBO members. Therefore, they were included in OU7 due to their potential future use as residential housing.

Both property use and the city's zoning designations may change over time. Although the 2005 zoning map is currently still in place, on October 8, 2014, the City of Cass Lake adopted a comprehensive plan that contains a Potential Future Land Use Map showing that many of the properties currently identified in OU7 would be suitable for commercial use rather than residential. Due to the dynamic nature of property use and zoning, EPA anticipates that a small number of properties may be reassigned between residential/OU7 and commercial/OU1 designations before the remedial action in OU7 is complete. In accordance with the NCP at 40 CFR Section 300.435(c)(2), EPA may modify remedies with a ROD Amendment or an Explanation of Significant Differences if formal clarification of the properties to be addressed in OU7 is needed.

8 Summary of Site Risks

Information in the Summary of site Risks section is based on the 2004-2011 HHERA, which estimates the risks posed by the site assuming no further remedial actions were taken, including the interim action selected in the October 2005 Interim ROD. The interim action was necessary to protect residents in OU7 from dioxin and arsenic concentrations in dust that exceed the residence-specific screening values developed for indoor settled dust of 2 ng per square meter for dioxin and 0.4 mg per square meter for arsenic. Sampling in 2004 showed that residence-specific values for dioxin exceeded the screening value in five of the ten homes sampled and residence-specific values for arsenic exceeded the screening value in four of the ten sampled homes. The

⁵ <https://mn.gov/admin/demography/data-by-topic/population-data/our-estimates>;
https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml.

results of this house dust sampling also demonstrated a correlation between soil dioxin values and in-house dust values.

The HHERA provides the basis for taking action and identifies the contaminants and exposure pathways that need to be addressed by remedial action. Some risk assessment values have been updated since the completion of the HHERA, such as the non-cancer reference dose (RfD) for 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD), which EPA updated in 2012 from 1.0×10^{-9} milligram per kilogram per day (mg/kg-day) to 7×10^{-10} mg/kg-day. Based on current cancer toxicity values used by EPA, the proposed cleanup level of 10 ppt TEQdf reflects a site-specific risk, of 1.6×10^{-6} , which is within EPA's acceptable cancer risk range, consistent with 40 CFR Section 300.430(e)(2)(i)(A)(2).

The HHERA's findings about risk and exposure pathways in OU7 contain uncertainties resulting from the collection and use of soil data, the use of sampled homes to represent unsampled properties, as well as in the assumptions made concerning the toxicity of dioxin; characterization of exposure pathways, including tribal lifeways; and quantification of exposure levels. The HHERA found that exposure to groundwater was an incomplete exposure pathway in OU7. This means that residents and other persons in OU7 are not expected to be in contact with contaminated groundwater.

8.1 Human Health Risk Assessment (HHRA)

8.1.1 Identification of Chemicals of Concern

The 2011 HHERA identified dioxin/furans and several PAHs as chemicals of potential concern (COPCs) for residential soil in Area A, which includes OU7⁶. Dioxin/furans and PAHs are listed in Table 2 as a toxicity equivalent quotient (World Health Organization, 2005) and benzo(a)pyrene equivalent (B(a)PE), respectively, along with minimum and maximum detected concentrations.

Table 2: Concentrations of Contaminants of Concern in Residential Areas⁷

| Chemical/ chemical group | | Min | Max | Location of Maximum Detection | Units | Frequency of Detection |
|--------------------------|--------------|--------|------|-------------------------------|-------|------------------------|
| Dioxins/ Furans | TEQDF(WHO98) | 10.5 | 442 | Allen-C | ppt | 41/41 |
| | TEQDF(WHO05) | 9.6 | 464 | | | |
| B(a)PE ⁸ | | 0.0106 | 1.48 | Res-13 | ppm | 19/19 |

⁶ Table 4-1 of the HHERA lists dioxin/furans, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene, and B(a)PE as COPCs for residential areas in Area A.

⁷ Values are from Table D1-1 of the HHERA. "Residential areas" as defined in the HHERA largely overlaps with OU7 but the two are not identical, so the number of samples in OU7 may differ slightly from the number reported under "frequency of detection". The locations identified with maximum detections, "Allen-C" and "Res-13", are both currently in OU7.

⁸ All carcinogenic PAHs are summed in B(a)PE (ND=0.5 DL). B(a)PE was retained as a COC based on exceedances of individual PAHs. The HHERA lists benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenzo[a,h]anthracene, indeno[1,2,3[c,d]pyrene, and BaPE as COPCs in residential areas (see Table 4-1 of the HHERA).

8.1.2 Exposure Assessment

8.1.2.1 Receptors and Exposure Pathways

Residents in OU7 can include members of the LLBO and non-LLBO individuals. The exposures of LLBO-members in Area A are expected to be typical of residential exposures among the general population, with one exception: tribal members may live in the site area for a longer duration compared to standard residents.

Residents in OU7 could potentially be exposed to chemicals in soil through direct contact with soil in their yards or with house dust that includes soil from the outside. Contact could include incidental ingestion of yard soil or house dust through hand-to-mouth contact, dermal contact with soil and house dust, or inhalation of soil particulates or re-suspended house dust.

Residents could also be exposed to chemicals in subsurface soil (below two feet below the surface) if excavation activities bring subsurface soil to the surface. However, the available data indicates that subsurface soil concentrations are generally lower than surface concentrations at the same location. Therefore, estimates of exposure were based on surface soil concentrations.

Certain chemicals in soil could be taken up by plants grown in home gardens and consumed by residents, so this pathway was considered potentially complete and evaluated as part of the future residential scenario.

Ingestion of shallow groundwater, dermal contact with shallow groundwater, and inhalation of vapors from shallow groundwater are potentially complete exposure pathways in OU7. Groundwater in residential areas was screened for residential exposures based on exceedance of drinking water Maximum Contaminant Levels, ECLR of 10^{-6} , or a hazardous index of one. There were no exceedances of screening criteria in residential wells, so these exposure pathways were not considered further in the HHRA. In addition, while inhalation of and skin contact with house dust are complete exposure pathways, they are considered minor relative to ingestion of house dust and exposures to soil, so they were not evaluated quantitatively in the HHRA.

The five exposure pathways determined to be complete for the residential scenarios and evaluated quantitatively in the HHRA are shown in Tables 3 and 4. The future residential scenario includes currently vacant properties that may be occupied in the future.

8.1.2.2 Calculation of Exposure Point Concentrations

Exposure Point Concentrations (EPCs) represent the concentration of each COPC to which a receptor is assumed to be exposed. For soil in residential yards, composite sample concentrations were used directly as EPCs. For both soil and indoor dust, TEQdfs calculated using the World Health Organization (WHO) 1998 TEFs, and one-half the detection limit for non-detected congeners, were used for deriving EPCs for dioxin. Media that were not sampled directly include outdoor dust and homegrown produce, so medium-specific EPCs were calculated using modeling techniques based on soil EPCs. Table 3 presents property-specific EPCs for TEQdf and BaPE.

Table 3: Exposure Point Concentrations in OU7⁹

| Location | TEQdf (WHO98, ND=1/2), ppt | | | | BaPE, ppm | | | |
|---------------------------|----------------------------|-------------|----------------------|-------------------|-----------|-------------|-----------------------|----------------------|
| | Soil | Indoor Dust | Outdoor Particulates | Homegrown Produce | Soil | Indoor Dust | Outdoor Particulates | Homegrown Produce |
| RES-01 | 45 | 45 | 3.3×10^{-8} | 0.04 | 0.23 | 0.23 | 1.7×10^{-10} | 4.9×10^{-4} |
| RES-02/40-(0-4) + Allen-C | 262 | 262 | 1.9×10^{-7} | 0.23 | 0.47 | 0.47 | 3.4×10^{-10} | 1.0×10^{-3} |
| RES-03 | 12 | 12 | 8.9×10^{-9} | 0.011 | 0.20 | 0.20 | 1.5×10^{-10} | 4.3×10^{-4} |
| RES-04 | 29 | 29 | 2.1×10^{-8} | 0.025 | 0.12 | 0.12 | 8.6×10^{-11} | 2.5×10^{-4} |
| RES-07 | 124 | 124 | 9.1×10^{-8} | 0.11 | 0.04 | 0.04 | 2.7×10^{-11} | 7.8×10^{-5} |
| RES-09 | 214 | 240 | 1.6×10^{-7} | 0.19 | 0.10 | 0.28 | 7.3×10^{-11} | 2.1×10^{-4} |
| RES-10 | 117 | 117 | 8.6×10^{-8} | 0.1 | 0.28 | 0.28 | 2.1×10^{-10} | 6.0×10^{-4} |
| RES-11 | 66 | 66 | 4.8×10^{-8} | 0.058 | 0.17 | 0.17 | 1.2×10^{-10} | 3.6×10^{-4} |
| RES-12 | 33 | 69 | 2.4×10^{-8} | 0.029 | 0.12 | 0.36 | 8.6×10^{-11} | 2.5×10^{-4} |
| RES-13 | 10 | 12 | 7.7×10^{-9} | 0.0092 | 1.48 | 0.22 | 1.1×10^{-9} | 3.2×10^{-3} |
| RES-14 | 31 | 55 | 2.3×10^{-8} | 0.027 | 0.46 | 0.39 | 3.4×10^{-10} | 9.8×10^{-4} |
| RES-16A-(0-4) | 287 | 287 | 2.1×10^{-7} | 0.25 | N/A | 0 | 0 | 0 |
| RES-16B-(0-4) | 48 | 48 | 3.5×10^{-8} | 0.042 | N/A | 0 | 0 | 0 |
| RES-17 | 124 | 30 | 9.1×10^{-8} | 0.11 | 0.01 | 0.17 | 7.8×10^{-12} | 2.3×10^{-5} |
| RES-18 | 20 | 17 | 1.5×10^{-8} | 0.018 | 0.57 | 0.49 | 4.2×10^{-10} | 1.2×10^{-3} |
| RES-19 | 28 | 28 | 2.0×10^{-8} | 0.024 | 1.34 | 1.34 | 9.9×10^{-10} | 2.9×10^{-3} |
| RES-24-(0-4) | 24 | 24 | 1.8×10^{-8} | 0.021 | N/A | 0 | 0 | 0 |
| RES-28-(0-4) | 28 | 28 | 2.0×10^{-8} | 0.024 | N/A | 0 | 0 | 0 |
| RES-39-(0-4) | 22 | 22 | 1.6×10^{-8} | 0.019 | N/A | 0 | 0 | 0 |
| ALLEN-C | 442 | 442 | 3.3×10^{-7} | 0.39 | N/A | 0 | 0 | 0 |
| NWWD-01-(0-4) | 10 | 10 | 7.3×10^{-9} | 0.0087 | N/A | 0 | 0 | 0 |
| NWWD-02-(0-4) | 40 | 40 | 2.9×10^{-8} | 0.035 | N/A | 0 | 0 | 0 |
| NWWD-03-(0-4) | 11 | 11 | 8.0×10^{-9} | 0.0095 | N/A | 0 | 0 | 0 |
| NWWD-04-(0-4) | 28 | 28 | 2.1×10^{-8} | 0.025 | N/A | 0 | 0 | 0 |
| NWWD-05-(0-4) | 14 | 14 | 1.0×10^{-8} | 0.012 | N/A | 0 | 0 | 0 |
| NWWD-06-(0-4) | 11 | 11 | 7.8×10^{-9} | 0.0093 | N/A | 0 | 0 | 0 |
| NWWD-07-(0-4) | 8 | 8 | 6.2×10^{-9} | 0.0073 | N/A | 0 | 0 | 0 |

8.1.3 Toxicity Assessment

Table 4 provides carcinogenic risk information which is relevant to the COCs in soil. At this time, slope factors (SFs) are not available for the dermal route of exposure. Thus, the dermal SFs used in the risk assessment have been extrapolated from oral values. An adjustment factor is

⁹ Values are from "EPCs" spreadsheet submitted with the HHERA. Locations evaluated in the HHERA as residential but not within OU7 are not reproduced here.

sometimes applied, and is dependent upon how well the chemical is absorbed via the oral route. Adjustments are particularly important for chemicals with less than 50 percent absorption via the ingestion route. However, adjustment is not necessary for the chemicals evaluated at this site. Therefore, the same values presented above were used as the dermal carcinogenic SFs for these contaminants.

TEQdf and B(a)PE are also considered carcinogenic via the inhalation route. They have inhalation unit risk factors of $33 \text{ m}^3/\mu\text{g}$ and $0.0011 \text{ m}^3/\mu\text{g}$, respectively.

Table 4: Cancer Toxicity Data Summary¹⁰

| Chemical of Concern | Pathway: Ingestion, Dermal | | Pathway: Inhalation | | Weight of Evidence/ Cancer Guideline Description | Source | Date |
|---------------------|----------------------------|------------------------------|--|----------------------|---|--------|------|
| | Oral Cancer SF (kg-day/mg) | Dermal Cancer SF (kg-day/mg) | Unit Risk ($\text{m}^3/\mu\text{g}$) | Inhalation Cancer SF | | | |
| TEQdf | 1.5×10^5 | 1.5×10^5 | 33 | -- | B2 ¹¹ | HEAST | 1997 |
| B(a)PE | 7.3 | 7.3 | 0.0011 | -- | B2 ² | IRIS | 2005 |

Table 5: Non-Cancer Toxicity Data Summary¹²

| Pathway: Ingestion, Dermal | | Pathway: Inhalation | |
|--|---------------------|---------------------------------------|------------------|
| Chemical of Concern | TEQdf | Chemical of Concern | -- ¹³ |
| Chronic/Subchronic | Chronic | Chronic/Subchronic | -- ⁴ |
| Oral RfD Value, mg/kg-day | 7×10^{-10} | Inhalation RfC | -- ⁴ |
| Dermal RfD, mg/kg-day | 7×10^{-10} | Inhalation RfD | -- ⁴ |
| Primary Target Organ | Behavior | Primary Target Organ | -- ⁴ |
| Combined Uncertainty/Modifying Factors | 90 ¹⁴ | Combined Uncertainty/Modifying Factor | -- ⁴ |
| Sources of RfD: Target Organ | ATSDR | Sources of RfC/RfD: Target Organ | -- ⁴ |
| Dates of RfD: Target Organ | 1998 | Dates | -- ⁴ |

Table 5 provides non-carcinogenic risk information which is relevant to the COCs in soil. The only COC with non-carcinogenic effects, TEQdf, has toxicity data indicating its potential for adverse non-carcinogenic health effects in humans. The chronic toxicity data available for TEQdf for oral exposures has been used to develop oral RfDs. The oral RfD for TEQdf is $1.0 \times 10^{-9} \text{ mg/kg-day}$ (Source: HEAST, USEPA 1997). The available toxicity data, from both

¹⁰ Values are from Tables 4-12 and 4-13 in the 2011 *Human Health and Ecological Risk Assessment*.

¹¹ B2 - Probable human carcinogen; indicates sufficient evidence in animals and inadequate or no evidence in humans.

¹² Values are from Tables 4-12 and 4-13 in the 2011 *Human Health and Ecological Risk Assessment*, adjusted to account for the 2012 dioxin RfD update from $1.0 \times 10^{-9} \text{ mg/kg-day}$ to $7 \times 10^{-10} \text{ mg/kg-day}$.

¹³ No information available.

¹⁴ This value is not in Table 4-12 of the HHERA, but is reported in the 1998 ATSDR document *Toxicological Profile for Chlorinated Dibenzo-p-dioxins* referenced in the HHERA.

chronic and sub chronic animal studies, indicates that TEQdf primarily affects behavior. A dermal RfD is not available for TEQdf. As was the case for the carcinogenic data, a dermal RfD can be extrapolated from the oral RfD by applying an adjustment factor as appropriate. However, for TEQdf, no adjustment is necessary, and the oral RfD discussed was used as the dermal RfD for TEQdf. At this time, inhalation reference concentrations are not available for any of the COCs.

8.1.4 Risk Characterization

This section summarizes the excess lifetime cancer risks (ELCRs) and Hazard Index (HI) values for adult and child residents in current and future scenarios at OU7.

8.1.4.1 Carcinogenic Risks

For carcinogens, risks are generally expressed as the incremental probability of an individual's developing cancer over a lifetime as a result of exposure to the carcinogen. ELCR is calculated from the following equation:

$$\text{Risk} = \text{CDI} \times \text{SF}$$

Where: Risk = A unitless probability (e.g., 2×10^{-5}) of an individual's developing cancer

CDI = Chronic daily intake averaged over 70 years (mg/kg-day)

SF = Slope factor, expressed as (mg/kg-day)⁻¹

These risks are probabilities that usually are expressed in scientific notation (e.g., 1×10^{-6}). An ELCR of 1×10^{-6} indicates that an individual experiencing the reasonable maximum exposure (RME) estimate has a 1 in 1,000,000 chance of developing cancer as a result of site-related exposures. ELCR is risk in addition to the risks of cancer individuals face from other causes such as smoking or exposure to too much sun. EPA's generally acceptable risk range for site-related exposures is 10^{-4} to 10^{-6} .

Table 6 shows the minimum, median, and maximum ELCR, which are all within EPA's acceptable risk range of 10^{-6} to 10^{-4} . However, the values listed may underestimate ELCR because EPA's September 2011 *Exposure Factors Handbook* (EPA/600/R-090/052F) updated several exposure assumptions to be more conservative.

Table 6: Estimated Excess Lifetime Cancer Risks for OU7¹⁵

| Exposure Scenario | Time-frame | Risk | Location | Incidental Ingestion of Soil | | Incidental Ingestion of Indoor Dust | | Dermal Contact with Soil | | Inhalation of Outdoor Particulates | | Ingestion of Homegrown Produce | | Total ELCR | |
|-------------------|------------|----------------------|---------------|------------------------------|--------------------|-------------------------------------|--------------------|--------------------------|--------------------|------------------------------------|---------------------|--------------------------------|--------------------|--------------------|--------------------|
| | | | | CTE | RME | CTE | RME | CTE | RME | CTE | RME | CTE | RME | CTE | RME |
| Tribal Resident | Current | Minimum | Multiple | 2×10 ⁻⁸ | 4×10 ⁻⁸ | 5×10 ⁻⁸ | 2×10 ⁻⁷ | 5×10 ⁻⁹ | 3×10 ⁻⁸ | 5×10 ⁻¹³ | 3×10 ⁻¹² | NA | NA | 7×10 ⁻⁸ | 2×10 ⁻⁷ |
| | | Median ¹⁶ | NWWD-03-(0-4) | 1×10 ⁻⁷ | 3×10 ⁻⁷ | 4×10 ⁻⁷ | 1×10 ⁻⁶ | 2×10 ⁻⁸ | 1×10 ⁻⁷ | 4×10 ⁻¹² | 2×10 ⁻¹¹ | NA | NA | 5×10 ⁻⁷ | 1×10 ⁻⁶ |
| | | Maximum | RES-16A-(0-4) | 3×10 ⁻⁶ | 7×10 ⁻⁶ | 1×10 ⁻⁵ | 3×10 ⁻⁵ | 4×10 ⁻⁷ | 3×10 ⁻⁶ | 1×10 ⁻¹⁰ | 6×10 ⁻¹⁰ | NA | NA | 1×10 ⁻⁵ | 4×10 ⁻⁵ |
| | Future | Minimum | NWWD-07-(0-4) | 8×10 ⁻⁸ | 2×10 ⁻⁷ | 3×10 ⁻⁷ | 8×10 ⁻⁷ | 1×10 ⁻⁸ | 9×10 ⁻⁸ | 3×10 ⁻¹² | 2×10 ⁻¹¹ | 3×10 ⁻⁸ | 2×10 ⁻⁷ | 4×10 ⁻⁷ | 1×10 ⁻⁶ |
| | | Median ¹⁶ | Res-15 | 3×10 ⁻⁷ | 8×10 ⁻⁷ | 1×10 ⁻⁶ | 3×10 ⁻⁶ | 6×10 ⁻⁸ | 4×10 ⁻⁷ | 1×10 ⁻¹¹ | 7×10 ⁻¹¹ | 1×10 ⁻⁷ | 8×10 ⁻⁷ | 2×10 ⁻⁶ | 5×10 ⁻⁶ |
| | | Maximum | Allen-C | 4×10 ⁻⁶ | 1×10 ⁻⁵ | 1×10 ⁻⁵ | 4×10 ⁻⁵ | 7×10 ⁻⁷ | 5×10 ⁻⁶ | 2×10 ⁻¹⁰ | 1×10 ⁻⁹ | 1×10 ⁻⁶ | 1×10 ⁻⁵ | 2×10 ⁻⁵ | 7×10 ⁻⁵ |
| Standard Resident | Current | Minimum | Multiple | 7×10 ⁻⁹ | 3×10 ⁻⁸ | 2×10 ⁻⁸ | 1×10 ⁻⁷ | 2×10 ⁻⁹ | 2×10 ⁻⁸ | 2×10 ⁻¹³ | 2×10 ⁻¹² | NA | NA | 3×10 ⁻⁸ | 2×10 ⁻⁷ |
| | | Median ¹⁶ | NWWD-03-(0-4) | 5×10 ⁻⁸ | 2×10 ⁻⁷ | 1×10 ⁻⁷ | 7×10 ⁻⁷ | 7×10 ⁻⁹ | 9×10 ⁻⁸ | 2×10 ⁻¹² | 2×10 ⁻¹¹ | NA | NA | 2×10 ⁻⁷ | 1×10 ⁻⁶ |
| | | Maximum | RES-16A-(0-4) | 1×10 ⁻⁶ | 6×10 ⁻⁶ | 4×10 ⁻⁶ | 2×10 ⁻⁵ | 2×10 ⁻⁷ | 2×10 ⁻⁶ | 7×10 ⁻¹² | 7×10 ⁻¹¹ | NA | NA | 5×10 ⁻⁶ | 3×10 ⁻⁵ |
| | Future | Minimum | NWWD-07-(0-4) | 4×10 ⁻⁸ | 2×10 ⁻⁷ | 1×10 ⁻⁷ | 6×10 ⁻⁷ | 6×10 ⁻⁹ | 7×10 ⁻⁸ | 1×10 ⁻¹² | 1×10 ⁻¹¹ | 7×10 ⁻⁹ | 9×10 ⁻⁸ | 2×10 ⁻⁷ | 9×10 ⁻⁷ |
| | | Median ¹⁶ | SWD-02-(0-4) | 1×10 ⁻⁷ | 7×10 ⁻⁷ | 4×10 ⁻⁷ | 2×10 ⁻⁶ | 2×10 ⁻⁸ | 3×10 ⁻⁷ | 5×10 ⁻¹² | 5×10 ⁻¹¹ | 3×10 ⁻⁸ | 4×10 ⁻⁷ | 6×10 ⁻⁷ | 3×10 ⁻⁶ |
| | | Maximum | Allen-C | 2×10 ⁻⁶ | 9×10 ⁻⁶ | 6×10 ⁻⁶ | 3×10 ⁻⁵ | 3×10 ⁻⁷ | 4×10 ⁻⁶ | 6×10 ⁻¹¹ | 6×10 ⁻¹⁰ | 4×10 ⁻⁷ | 5×10 ⁻⁶ | 9×10 ⁻⁶ | 5×10 ⁻⁵ |

¹⁵ Values are from Table 4-18 in the 2011 HHRA.

¹⁶ Median values represent the median of locations evaluated in the HHRA as residential, which includes some locations that are not in OU7 (including SWD-04-(-0-4)) and does not include other locations in OU7 that have been sampled since the HHRA was approved. Although the locations and associated values identified as median therefore do not represent the median for OU7 as currently defined, the median values for OU7 is expected to be similar to the values listed here.

Table 7: Noncancer Hazards for Residential Areas¹⁷

| Exposure Scenario | Risk | Location | Age | Incidental Ingestion of Soil | | Incidental Ingestion of Indoor Dust | | Dermal Contact with Soil | | Inhalation of Outdoor Particulates | | Ingestion of Homegrown Produce | | Total Hazard Index | |
|--|----------------------|----------------|-------|------------------------------|--------------------|-------------------------------------|--------------------|--------------------------|--------------------|------------------------------------|-----|--------------------------------|--------------------|--------------------|--------------------|
| | | | | CTE | RME | CTE | RME | CTE | RME | CTE | RME | CTE | RME | CTE | RME |
| Current Resident (Tribal and Standard) | Minimum | Multiple | Child | 9×10 ⁻⁴ | 1×10 ⁻³ | 3×10 ⁻³ | 4×10 ⁻³ | 1×10 ⁻⁴ | 7×10 ⁻⁴ | 0 | 0 | NA | NA | 3×10 ⁻³ | 7×10 ⁻³ |
| | | | Adult | 3×10 ⁻⁴ | 4×10 ⁻⁴ | 1×10 ⁻³ | 1×10 ⁻³ | 4E-05 | 1×10 ⁻⁴ | 0 | 0 | NA | NA | 1×10 ⁻³ | 1×10 ⁻³ |
| | Median ¹⁸ | NWWVD-03-(0-4) | Child | 1×10 ⁻² | 1×10 ⁻² | 3×10 ⁻² | 6×10 ⁻² | 1×10 ⁻³ | 7×10 ⁻³ | 0 | 0 | NA | NA | 4×10 ⁻² | 9×10 ⁻² |
| | | | Adult | 3×10 ⁻³ | 4×10 ⁻³ | 1×10 ⁻² | 1×10 ⁻² | 6×10 ⁻⁴ | 1×10 ⁻³ | 0 | 0 | NA | NA | 1×10 ⁻² | 1×10 ⁻² |
| | Maximum | RES-16A-(0-4) | Child | 0.3 | 0.6 | 0.7 | 1.4 | 6×10 ⁻³ | 3×10 ⁻² | 0 | 0 | NA | NA | 1.0 | 1.4 |
| | | | Adult | 0.1 | 0.1 | 0.3 | 0.4 | 1×10 ⁻² | 4×10 ⁻² | 0 | 0 | NA | NA | 0.4 | 0.6 |
| Future Resident (Tribal and Standard) | Minimum | RES-13 | Child | 7×10 ⁻³ | 1×10 ⁻² | 1×10 ⁻² | 4×10 ⁻² | 1×10 ⁻³ | 4×10 ⁻³ | 0 | 0 | 4×10 ⁻⁴ | 1×10 ⁻³ | 3×10 ⁻² | 6×10 ⁻² |
| | | | Adult | 3×10 ⁻³ | 3×10 ⁻³ | 7×10 ⁻³ | 1×10 ⁻² | 4×10 ⁻⁴ | 1×10 ⁻³ | 0 | 0 | 4×10 ⁻⁴ | 1×10 ⁻³ | 1×10 ⁻² | 1×10 ⁻² |
| | Median ¹⁸ | SWD-04-(0-4) | Child | 1×10 ⁻² | 4×10 ⁻² | 6×10 ⁻² | 0.11 | 3×10 ⁻³ | 1×10 ⁻² | 0 | 0 | 1×10 ⁻³ | 6×10 ⁻³ | 9×10 ⁻² | 0.1 |
| | | | Adult | 7×10 ⁻³ | 1×10 ⁻² | 3×10 ⁻² | 3×10 ⁻² | 1×10 ⁻³ | 4×10 ⁻³ | 0 | 0 | 1×10 ⁻³ | 6×10 ⁻³ | 3×10 ⁻² | 6×10 ⁻² |
| | Maximum | Allen-C | Child | 0.4 | 0.7 | 1.1 | 2.9 | 6×10 ⁻² | 3E-01 | 0 | 0 | 3×10 ⁻² | 0.1 | 1.4 | 2.9 |
| | | | Adult | 0.1 | 0.1 | 0.4 | 0.6 | 3×10 ⁻² | 7×10 ⁻² | 0 | 0 | 3×10 ⁻² | 0.1 | 0.7 | 1.0 |

¹⁷ Values are from Table 4-14 in the 2011 HHERA, adjusted to account for the 2012 dioxin RfD update from 1.0×10^{-9} mg/kg-day to 7×10^{-10} mg/kg-day.¹⁸ Median values represent the median of locations evaluated in the HHERA as residential, which includes some locations that are not in OU7 (including SWD-04-(-0-4)) and does not include other locations in OU7 that have been sampled since the HHERA was approved. Although the locations and associated values identified as median therefore do not represent the median for OU7, the median values for OU7 is expected to be similar to the values listed here.

8.1.4.2 Non-carcinogenic Hazards

The potential for non-carcinogenic effects is evaluated by comparing an exposure level over a specified time period (e.g., life-time) with a RfD derived for a similar exposure period. A RfD represents a level that an individual may be exposed to that is not expected to cause any deleterious effect. The ratio of exposure to toxicity is called a hazard quotient (HQ). An $HQ < 1$ indicates that a receptor's dose of a single contaminant is less than the RfD, and that toxic non-carcinogenic effects from that chemical are unlikely. The HI is generated by adding the HQs for all chemical(s) of concern that affect the same target organ (e.g., liver) or that act through the same mechanism of action within a medium or across all media to which a given individual may reasonably be exposed. An $HI < 1$ indicates that, based on the sum of all HQs from different contaminants and exposure routes, toxic noncarcinogenic effects from all contaminants are unlikely. An $HI > 1$ indicates that site-related exposures may present a risk to human health.

The HQ is calculated as follows:

$$\text{Non-cancer HQ} = \text{CDI/RfD}$$

Where:

CDI = Chronic daily intake

RfD = Reference dose

Table 7 shows the minimum, median, and maximum HI associated with each exposure pathway for adult and child residents in current and future scenarios. The maximum reasonable future child residential exposure scenario at the OU7 property with the highest contamination is associated with a HI of 2.9. However, the values listed may underestimate HI because EPA's September 2011 Exposure Factors Handbook (EPA/600/R-090/052F) updated several exposure assumptions to be more conservative.

8.2 Ecological Risk Assessment

The objective of the Ecological Risk Assessment (ERA) was to identify and characterize potential adverse ecological effects attributable to chemicals at the site that remain after the remedial actions and removal actions that have taken place from the mid-1980s to the present. The ERA addressed terrestrial habitat in the former operations/north storage area of the site and adjacent properties, collectively known in the HHERA as "Area A", where the exposure medium of potential ecological concern is soil. This area includes the residences in OU7 which are addressed by this ROD.

The ERA also assessed the forested wetland; terrestrial habitat at the city dump area, southwest area, and contiguous Chippewa National Forest lands; and aquatic habitat in Fox Creek, Pike Bay, the channel linking Cass Lake and Pike Bay, and associated wetlands. Since this ROD focuses on only the soils in residential areas, the ERA results for the aquatic community and terrestrial receptors outside of Area A will not be discussed.

8.2.1 Identification of Chemicals of Potential Ecological Concern

The selection of a chemical as a Chemical of Potential Ecological Concern (COPEC) was based on evidence of the presence within the study area of a chemical in environmental media which may be a source of exposure, whether or not that chemical is related to the historical operations of the St. Regis facility. For naturally occurring chemicals that exceeded soil or sediment screening values, a comparison of concentrations in media from the site with concentrations in background reference areas was also considered in the final selection of COPECs for this ERA.

Table 8 shows the chemicals and chemical groups, along with their screening values, that were identified as COPECs in terrestrial soils of the former operations area.

Table 8: COPECs in Terrestrial Soils of the Former Operations Area¹⁹

| Chemical | Units | Detected concentration | | Screening Value | Source | Number of Screening Value Exceedances in Former Operations Area |
|-----------------------------------|-------|------------------------|--------|-----------------|----------------------|---|
| | | Min | Max | | | |
| PCDD, total | ppt | 0.42 | 1090 | 0.199 | SL ²⁰ | 125/128 |
| PCDF, total | ppt | 1.24 | 13,200 | 38.6 | SL | 114/128 |
| TEQDF _{WHO98} (ND=0.5DL) | ppt | 1.94 | 5,000 | 2 | WSDE ²¹ | 127/128 |
| Antimony | ppm | 0.05 | 3.59 | 0.3 | EcoSSL ²² | 19/57 |
| Lead | ppm | 2.1 | 70.9 | 11 | EcoSSL | 22/57 |
| Selenium | ppm | 0.065 | 2.5 | 0.81 | ESV ²³ | 4/57 |
| Vanadium | ppm | 5 | 14.6 | 7.8 | EcoSSL | 33/57 |
| PAHs (total) | ppm | 0.071 | 80 | 1 | ESV | 54/77 |
| Total DDX | ppm | 4.05 | 13.1 | 2.5 | ESV | 13/16 |
| PCP | ppm | 0.009 | 14.5 | 0.0018 | EcoSSL | 63/83 |

8.2.1 Exposure Assessment

8.2.1.1 Habitat and Exposure Units

Terrestrial habitat in most of OU7 is dominated by mown grassy fields. Soils are generally sandy and well-drained, with peat and silty clay occurring in some low-lying areas. Only soils collected from a depth of 0–4 inches were used in calculation of exposures for birds and mammals.

¹⁹ See Table 5-2 of the HHERA and Section 2.2 of Appendix E of the HHERA.

²⁰ EPA Region 4 recommended ecological screening value for soil.

²¹ Washington State Model Toxics Control Act.

²² See the EPA document *Ecological Screening Level Guidance* (2000), subsequent revisions to EcoSSLs available online, and Section 5.1.1.2 of the HHERA for additional information.

²³ EPA Region 5 RCRA ecological screening level.

An exposure unit is the area in which a receptor moves and contacts environmental media for the duration of the exposure. For birds and mammals, Area A was considered one exposure unit, for which the average and RME exposures were estimated.

8.2.1.2 Identification of Receptors

Four types of ecological receptors are relevant to Area A: plants, soil invertebrates, terrestrial mammals, and terrestrial birds. Two species – meadow vole [*Microtus pennsylvanicus*] and northern short-tailed shrew [*Blarina brevicauda*] – were selected to represent the terrestrial mammal receptor, and the American robin [*Turdus migratorius*] was selected to represent the terrestrial bird receptor. Grasses, earthworms, and grubs are considered to be vectors (through bioaccumulation) of contaminants to bird and mammal consumers, in addition to being representative of terrestrial plants and soil-dwelling invertebrates, respectively.

Information regarding federal- and state-listed endangered and threatened species (including sensitive and candidate species) was received from the U.S. Fish and Wildlife Service (USFWS) and the Minnesota Department of Natural Resources (MDNR) Natural Heritage Program (NHP). The MDNR NHP (Hoffman 2004, pers. comm.) indicated that there is only one endangered species, the pale moonwort (*Botrychium pallidum*), that is known to occur within 1 mile of the site. The presence of this plant species in the immediate area of the site has not been documented. According to USFWS, one threatened species may be present in the vicinity of the site: Canada Lynx (*Lynx Canadensis*) (Stinnett 2004). The population of Canada lynx is known to be very sparse in the site area.

8.2.1.3 Selection of Toxicity Reference Values

Table 9 lists the Toxicity Reference Values (TRVs), RME soil concentrations in Area A, and HQ at the location of maximum concentration in Area A for plants and soil invertebrates. Available TRVs for the COPECs at the site are summarized as lowest observed adverse effect concentrations (LOAECs) and no observed adverse effect concentrations (NOAECs) in soils. Soil invertebrate and terrestrial plant exposure to soil contaminants was evaluated by calculating the mean and RME (either 95UCL or maximum value, whichever was lower) concentrations of each COPEC in Area A soils, and then comparing to the TRV to calculate a HQ. Although the maximum HQ at a single location is greater than 1 (at which the potential for risk is assumed to be possible) for PCP and selenium for plants, and for total PAHs for invertebrates, the RME soil concentration for all of Area A as an exposure unit was less than the TRV for all contaminants.

Exposures of birds and mammals were quantified as the daily rate of ingestion of each COPEC (milligram per kilogram body weight per day (mg/kg bw-day)). Table 10 lists the TRVs, RME daily rates of ingestion for Area A for the vole and the shrew, and the corresponding RME HQ for contaminants that had at least one exceedance of the TRV in Area A. Although the HQ for shrew exposure to TCDD is 8, the estimated exposure of shrew to dioxins/furans were less than the lowest observed adverse effect level (LOAEL) in all cases.

Table 9: TRVs, RME, and Maximum HQ in the Former Operations Area for Plants and Soil Invertebrates

| Chemical | NOAEC ppt, dry weight | LOAEC | Endpoint | Reference | EPC (RME soil concentration in Area A ²⁴) | Maximum HQ |
|---|---|-------|-------------------------------|-----------------------------------|--|------------------|
| | TRVs for Soil That Are Protective of Plants ²⁵ | | | | | |
| TRVs for Soil that are Protective of Soil Invertebrates ²⁷ | | | | | | |
| DDT and metabolites | NA | 7.1 | NA | EPA 2007 | DDD – 0.0017 DDE – 0.0023 DDT – 0.011 | NR ²⁶ |
| PAHs (total) | 1200 | NA | NA | Sims and Overcash, 1983 | LPAH – 0.81 HPAH – 8.5 | NR ²⁶ |
| PCP | NA | 5 | Growth EC50 | Eco-SSL | 1.9 | 3 |
| Antimony | 5 | NA | Non-specific | Efroymson et al., 1997 | 1.1 | NR ²⁶ |
| Lead | 125 | 150 | Plant weight | Miller et al., 1977 | 18 | NR ²⁶ |
| Selenium | 1 | NA | Growth | Efroymson et al., 1997 | 0.43 | 3 |
| Vanadium | 100 | NA | Growth EC50 | Eco-SSL | 9.4 | NR ²⁶ |
| Dioxins/ furans | 5 | 10 | Survival | Eisler, 1986 | TEQDFP _(ND=1/2 DL, mammal TEFs) – 0.00083 TEQDFP _(ND=1/2 DL, bird TEFs) – 0.0005 | NR ²⁶ |
| DDT/DDE/DDD | 0.122 | NA | NA | NA | DDD – 0.0017 DDE – 0.0023 DDT – 0.011 | NR ²⁶ |
| PAHs (total) | 25 | NA | Survival | Van Straalen and Verweij, 1991 | LPAH – 0.81 HPAH – 8.5 | 3 |
| PCP | 31 | NA | Reproduction | Eco-SSL | 1.9 | NR ²⁶ |
| Antimony | NA | 78 | Reproduction EC ₂₀ | Eco-SSL | 1.1 | NR ²⁶ |
| Lead | 1,700 | NA | Survival, reproduction | Eco-SSL | 18 | NR ²⁶ |
| Selenium | NA | 70 | Growth, reproduction | Efroymson et al., 1997 | 0.43 | NR ²⁶ |
| Vanadium | NA | NA | NA | NA | NA | NR ²⁶ |

²⁴ Table E5-1 of the HHERA.

²⁵ Tables 5-33 and 5-39 of the HHERA.

²⁶ Maximum HQ not reported in Table 5-39 or Table 5-40 of the HHERA because concentrations at all locations were less than the TRV.

²⁷ Table 5-34 and 5-40 of the HHERA.

Table 10: TRVs for Mammals Exposed via Ingestion²⁸

| Chemical | NOAEL | | LOAEL | Endpoint | Reference | RME Daily Rate of Ingestion ²⁹ | | | RME HQ in Area A | |
|-------------|--------------------|--------------------|-------|-------------------|------------------------------|---|---|--|--------------------|---------------------|
| | mg/kg bw-day | | | | | Vole | Shrew | | Vole ³⁰ | Shrew ³¹ |
| TCDD | 1×10 ⁻⁶ | 1×10 ⁻⁵ | | Reproduction | Murray et al., 1979 | TEQDFP _(ND=1/2 DL, mammal TEFs) 1.4×10 ⁻⁶ | TEQDFP _(ND=1/2 DL, mammal TEFs) 8.5×10 ⁻⁶ | | 1 | 8 |
| DDT/DDE/DDD | 1.6 | 16 | | Reproduction | Clement and Okey, 1974 | NA | NA | | NA | NA |
| LPAHs | 13.3 | NA | | Growth, mortality | Shopp et al., 1984 | 0.0037 | 0.0082 | | <0.1 | <0.1 |
| HPAHs | 1 | 10 | | Reproduction | Mackenzie and Angevine, 1981 | 0.018 | 0.082 | | <0.1 | <0.1 |
| PCP | 3.96 | 12.9 | | Reproduction | Welsh et al., 1987 | 0.0065 | 0.097 | | <0.1 | <0.1 |
| Antimony | 0.059 | 0.59 | | Reproduction | Rossi et al., 1987 | 0.025 | 0.016 | | 0.4 | 0.3 |
| Lead | 4.7 | 8.9 | | Growth | Kimmel et al., 1980 | 0.059 | 0.67 | | <0.1 | 0.1 |
| Selenium | 0.20 | 0.33 | | Reproduction | Rosenfeld and Beath, 1954 | 0.14 | 0.015 | | <0.1 | 0.7 |
| Vanadium | 4.16 | 5.11 | | Growth | EcoSSL | 0.53 | 0.031 | | <0.1 | 0.1 |

²⁸ Table 5-37 of the HHRA.

²⁹ Table E5-7 of the HHRA.

³⁰ Table 5-41 of the HHRA.

³¹ Table 5-42 of the HHRA

Table 11 lists the TRVs, RME daily rates of ingestion, and corresponding RME HQ for each COPEC for birds. The HQ for American robin exposure to antimony is 7, but this was calculated from a mammalian TRV multiplied by a factor of 0.1 because no TRV for birds was available for this contaminant. The HQ for American robin exposure to vanadium is two, but the TRV was based on the most conservative value available using gallinaceous birds. Other RME HQs are below the TRVs.

Table 11: TRVs for Birds Exposed via Ingestion³²

| Chemical | NOAEC | LOAEC | Endpoint | Reference | RME Daily Rate of Ingestion ³³ | RME HQ in Former Operations Area: Robin ³⁴ |
|---|--------------------------|------------|--------------|---|---|---|
| | mg/kg bw-day | | | | | |
| TEQ _{DFFP} (ND=0.5, bird TEFs) | 0.0001 | 0.001 | Mortality | Schwetz et al, 1973 | 1.6×10 ⁻⁵ | 0.2 |
| DDT | 0.3 | 0.75 | Reproduction | Heath et al., 1969 | NA | NA |
| DDE | 0.023 | 0.23 | Reproduction | Lincer et al., 1975 | NA | NA |
| DDD | 1.0 | NA | Reproduction | Heath et al., 1969 | NA | NA |
| LPAHs | 213 | 2120 | Reproduction | Stubblefield et al., 1995 | 0.021 | <0.1 |
| HPAHs | 0.2 | 2.0 | Growth | Trust et al., 1994 | 0.21 | 1 |
| PCP | 6.73 | 67.3 | Growth | Stedman et al., 1980 | 0.15 | <0.1 |
| Antimony | 0.0059 | NA | NA | EcoSSL | 0.043 | 7 |
| Lead | 1.63 | 3.26 | Reproduction | Edens and Garlich, 1983 | 1.1 | 0.7 |
| Selenium | 0.4 (duck), 1.66 (heron) | 0.8 (duck) | Reproduction | Heinz et al., 1989 (duck), Smith et al., 1988 (heron) | 0.18 | 0.5 |
| Vanadium | 0.344 | 0.413 | Growth | EcoSSL | 0.78 | 2 |

8.2.1 Ecological Effects Assessment

Soil toxicity tests were conducted on six soil samples from Area A according to a standardized test protocol (American Society for Testing and Materials Method E-1676-97) using the earthworm, *Eisenia fetida*, representing the soil invertebrate community. Mean survival of

³² Table 5-38 of the HHERA.

³³ Table E5-7 of the HHERA.

³⁴ Table 5-44 of the HHERA.

earthworms in all samples from Area A was 100 percent, indicating that the soils sampled from Area A are not toxic to invertebrates.

8.2.2 Ecological Risk Characterization

In Area A, exceedances of conservative TRVs for plants were very few, and the reasonable maximum concentrations of all COPECs in soil did not exceed TRVs, so although some individual locations exceeded the TRV, the ERA concluded that risks to the terrestrial plant community in its role as forage and habitat for wildlife was negligible NOAEC values. Similarly, RME concentrations of COPECs did not exceed their TRVs for soil invertebrates, although some individual locations exceeded the TRV. However, soil toxicity testing showed that Area A soil was not toxic to soil invertebrates.

None of the RMEs exceeded LOAELs for the vole or shrew, but the RME for TCDD exceeded the no observed adverse effect level (NOAEL) for both species of terrestrial mammals. The RMEs for the robin exceeded the LOAEC for only vanadium, but the RMEs for other COPECs were below the NOAEC, and the risks to insectivorous birds due to vanadium are low.

In summary, with respect to Area A, of which OU7 is a portion, the risks to ecological receptors from contaminated soil were evaluated and found to be low to absent.

9 Remedial Action Objectives

As described in Section 6, OU7 is defined as properties that are currently used as residences, or that may be reasonably anticipated to be used as residences due to either their residential zoning designation by the City of Cass Lake or the potential to be used for additional housing for tribal members. Because the non-cancer risk to a potential future child resident exceeds EPA's acceptable HI threshold of one, action is required to prevent unacceptable risk. Therefore, the Remedial Action Objective for OU7 is:

- Prevent unacceptable potential risk to human health from future exposure to site-related COCs in OU7 soil through ingestion of soil and garden produce, inhalation of soil and indoor dust, and dermal adsorption routes of exposure at residential properties in OU7.

9.1 Cleanup Levels

The Supplemental FS Report defines two levels of Preliminary Remedial Goals (PRGs) for the soil contaminants in OU7. The PRG levels generally correspond to a 10^{-6} ELCR (Level 1 PRG) or a 10^{-5} ELCR (Level 2-R PRG) for residential exposure; both correspond to an HI that is less than one for non-carcinogenic effects. In selecting the specific concentrations for the PRG levels, EPA considered site-specific risk-based concentrations, background concentrations, and the 10 ppt dioxin cleanup level described in LLBO's HSCA. The HSCA dioxin cleanup level is a requirement "to be considered" (TBC). The TBC category consists of advisories, criteria, or guidance that may be useful in developing CERCLA remedies. The 10 ppt standard corresponds to an ELCR of 1.6×10^{-6} for residential use, consistent with the risk level designated in the Level 1 PRGs. Therefore, the Level 1 PRG for dioxin corresponds to the 10 ppt cleanup level established in HSCA as a TBC.

Table 12 summarizes the PRGs and associated potential cleanup levels along with background concentrations and estimated depths to reach the cleanup levels.

Table 12: Preliminary Remedial Goals and Cleanup Levels for COCs in OU7 soil

| Chemical | PRG Level | Basis | Cleanup Level | Background (95% percentile) | Estimated Average Depth to PRG in OU7 (ft.) |
|----------|---------------------|--|---------------|-----------------------------|---|
| Dioxin | Level 1 | Regulatory requirement; HSCA (TBC) | 10 ppt | 7.5 ppt | 2.0 |
| | Level 2-R | Risk-based; 10^{-5} ELCR (residential) | 63 ppt | | 1.3 |
| B(a)PE | Level 1 & Level 2-R | Background Concentration | 1.6 ppm | 1.6 ppm | 1.3 |

Generally, under CERCLA, cleanup levels are not set at concentrations below natural or anthropogenic background levels. Because the background concentration of B(a)PE at St. Regis is greater than the concentrations that correspond to a residential 10^{-6} and 10^{-5} ELCR, the cleanup level for B(a)PE for both the Level 1 and Level 2-R PRGs are equal to the background level of 1.6 ppm.

10 Description of Alternatives

CERCLA and the NCP set forth the process by which remedial actions are evaluated and selected. In accordance with these requirements, a FS was conducted which developed a range of remedial alternatives, listed in Table 13. Section 3 of the Supplemental FS Report identifies remedial technologies and screens them based on implementability, effectiveness, and relative cost. The initial screening narrows the number of potential remedial alternatives for further detailed analysis while preserving a range of options.

Section 4 of the Supplemental FS Report presents the remedial alternatives that were developed by combining response actions and technologies to address the elevated human health and ecological risks. The alternatives were also intended to represent a wide range of effectiveness, duration of time required to achieve RAOs and cost to implement, thus allowing for an evaluation of the trade-offs between effectiveness and cost. In accordance with the NCP, a “No Action” Alternative, S10, is evaluated as a baseline to which other alternatives can be compared. Under S10, it is assumed that no active remediation or monitoring would occur, and any reduction in toxicity or volume of contaminants would occur as a result of natural processes.

Table 13: Descriptions and Distinguishing Features of Each Alternative

| Alternative | Estimated Costs, (Millions) ³⁵ | | | Estimated Implementation Timeframe, years | Estimated Time to Achieve RAOs, years | Estimated Soil Excavation Volume (cubic yards) | Description of Alternative |
|-------------|---|--------------------|---------------------------------------|---|---------------------------------------|--|---|
| | Capital (\$ millions) | O&M (\$ thousands) | Present Worth (30 years; \$ millions) | | | | |
| S10 | \$0 | \$0 | \$0 | Not applicable | Not applicable | 0 | No action. |
| S11 | A \$12 | \$62 | \$12.1 | 1 | 1 | 36,800 | Excavate contaminated soil on properties exceeding Level 2-R PRGs ³⁶ , which for most properties will be achieved in the first foot of excavation. |
| | B \$9.2 | \$140 | \$9.3 | | | | |
| S12 | A \$14.2 | \$93 | \$14.3 | 2 | 2 | 36,800 | Excavate contaminated soil on properties exceeding Level 2-R PRGs ³⁶ ; apply a geotextile marker and 12-inch clean soil cover on properties exceeding Level 1 PRGs ³⁷ but is less than Level 2 PRGs-R. |
| | B \$11.2 | \$180 | \$11.4 | | | | |
| S13 | A \$13.5 | \$96 | \$13.6 | 2 | 2 | 24,900 | Excavate contaminated soil on properties that currently have a resident or habitable building and that exceed Level 1 PRGs ³⁷ ; apply a geotextile marker and 12-inch clean soil cover to all other properties that exceed Level 1 PRGs. |
| | B \$11.6 | \$180 | \$11.8 | | | | |
| S14 | A \$22.5 | \$80 | \$22.5 | 2 | 2 | 67,400 | Excavate contaminated soil on properties not owned by IP that exceed Level 1 PRGs ³⁷ ; apply a geotextile marker and 12-inch clean soil cover to all IP-owned properties exceeding Level 1 PRGs. |
| | B \$17.8 | \$240 | \$18.0 | | | | |
| S15 | A \$29.9 | \$62 | \$30.0 | 3 | 3 | 111,100 | Excavate soil on all properties with contamination exceeding Level 1 PRGs ³⁷ . |
| | B \$21.2 | \$230 | \$21.4 | | | | |

³⁵ Costs may differ slightly from those presented in the FS Report due to differences in rounding, and costs for the “B” alternatives are between 14-17 percent greater than those presented in the Proposed Plan due to the addition of the costs of the soil consolidation area. See the Administrative Record, October 16, 2016 *Memo to File re: Costs for OU7 Remedy - Proposed Plan of 3/2016*.

³⁶ Level 2-R PRGs: 63 ppt dioxin, 1.6 ppm B(a)PE (see Table 12).

³⁷ Level 1 PRGs: 10 ppt dioxin, 1.6 ppm B(a)PE (see Table 12).

10.1 Common Elements and Distinguishing Features of Each Alternative

All of the alternatives, with the exception of the “No Action” alternative (Alternative S10), contain common components. The shared features of Alternatives S11 through S15 include:

- Excavation of soil on some or all properties in OU7 to the depth needed to reach the selected PRG. Excavated areas would be backfilled with tested clean soil and revegetated.
- An “A” sub-alternative, in which excavated soil would be tested and classified according to its suitability for disposal in either a RCRA Subtitle D landfill or RCRA Subtitle C disposal facility.
- A “B” sub-alternative, in which excavated soil would be tested and classified according to its suitability for onsite consolidation, containment in a RCRA Subtitle D landfill, or offsite disposal in a RCRA Subtitle C disposal facility. Soil that does not pose a leaching threat would be consolidated in an area of OU1 or OU2, covered by a geotextile marker, clean fill, and topsoil, and then revegetated.
 - Soil consolidated in OU1 or OU2 would be subject to the final soil remedy for that OU. If the final OU1/OU2 soil remedy requires off-site disposal of soil above a cleanup level exceeded by the consolidated soil, then the consolidated soil would be disposed off-site. If the final OU1/OU2 soil remedy selects a cleanup level that the consolidated soil meets, or selects clean soil cover or other engineering control rather than off-site disposal, then the consolidated soil would remain permanently in place. EPA will select the OU1/OU2 soil remedy, including the final disposition of the consolidated soil, in a future ROD based on an evaluation of EPA’s nine remedy selection criteria.
 - Soil excavated from the onsite consolidation area in OU1 or OU2 would be tested and is expected to be suitable for use as clean fill in OU7 and to cover the consolidated soil.
- All OU7 properties would be suitable for residential use at the completion of the remedial action.
- Monitoring and control of air quality (dust) during construction.
- Until soil in OU1 and OU2 is remediated, measures to confirm that no recontamination from the adjacent OUs is occurring will be required, such as some or all of the actions required by the 2005 interim OU7 remedy for potentially contaminated dust and/or, collection of soil samples and/or dust samples from representative OU7 residential properties.

Alternatives S12, S13 and S14 also share the following features:

- Clean soil cover, rather than excavation, in a portion of OU7, comprised of a marker material covered by the layer of clean fill and top soil, followed by vegetation.
- ICs would be needed on those properties that received a clean soil cover to inform future owners of the presence of soil on the property below the cover that exceeds the Level 1 PRGs, and prevent exposure to the soil below the cover.

The alternatives differ from each other in cost, estimated timeframe to complete the remedial action and meet RAOs, and in the volume of soil estimated to be excavated. Greater volumes of excavated soil correspond with longer implementation timeframes and greater costs. These differences are presented in Table 13.

11 Comparative Analysis of Alternatives

11.1 Statutory Requirements/Response Objectives

Under its legal authorities, EPA's primary responsibility at Superfund sites is to undertake remedial actions that are protective of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences, including:

- A requirement that EPA's remedial action, when complete, comply with all federal and more stringent tribal and state environmental and facility siting standards, requirements, criteria, or limitations, unless a waiver is invoked;
- A requirement that EPA select a remedial action that is cost-effective and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and
- A preference for remedies in which treatment that permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances is a principal element, as opposed to remedies not involving such treatment.

Section 121(b)(1) of CERCLA presents several factors that EPA is required to consider in its assessment of alternatives. Building upon these specific statutory mandates, the NCP articulates nine evaluation criteria to be used in assessing the individual remedial alternatives. A detailed analysis was performed on the alternatives described in Section 10, using the nine evaluation criteria in order to select a site remedy. The following is a summary of the comparison of each alternative's strength and weakness with respect to the nine evaluation criteria. These criteria are divided into three categories: threshold criteria (Sections 11.2 and 11.3), which must be met for an alternative to be selected; primary balancing criteria (Sections 11.4 through 11.8), which are used to compare and evaluate the elements of one alternative to another that meet the threshold criteria; and modifying criteria (Sections 11.9 and 11.10), which are used as the final evaluation of remedial alternatives, generally after EPA has received public comment on the Supplemental FS Report and Proposed Plan.

11.2 Overall Protection of Human Health and the Environment

This criterion addresses whether each alternative provides adequate protection of human health and the environment and describes how risks posed through each exposure pathway are eliminated, reduced or controlled, through treatment, engineering controls, and/or ICs. In addition to defining an acceptable ELCR range of 10^{-6} to 10^{-4} , the NCP, at 40 CFR 300.430(e)(2)(i)(A)(2), provides that the 10^{-6} risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available. The 10^{-6} point of departure corresponds to the Level 1 PRGs, and generally correlates with the dioxin standard in HSCA as a TBC.

Achieving a level of protection at the more stringent end of Superfund's acceptable cancer risk range is appropriate in OU7 given the current and future anticipated residential use of the OU7 properties. Residential properties are associated with a high likelihood for sensitive subpopulations to be present, such as children. In addition, LLBO has a limited reservation land base for residential housing, and LLBO members residing in OU7, now or in the future, may incur additional exposures through engaging in tribal lifeways activities (e.g., collection of local plants for consumption, medicinal use, crafts, and use in tribal ceremonies).

EPA believes that the 10^{-6} risk level corresponding to the Level 1 PRGs is the appropriate level of protection of human health and the environment in OU7. Therefore, for this remedial action, remedial alternatives should meet the Level 1 PRG risk level in order to meet the threshold criterion of overall protection of human health and the environment.

Alternative S10, the No Action Alternative, is the least protective alternative since no active remedial action or monitoring is proposed. The existing levels of site contaminants would be allowed to persist until natural recovery reaches acceptable levels. Given the persistence of unsafe concentrations of site COCs and the length of time that natural recovery would take place, EPA has determined that Alternative S-10 is not protective.

Alternative S11 only addresses soil on properties that exceed Level 2 PRGs, and is not protective of human health and the environment at EPA's designated PRG level. Because Alternatives S10 and S11 do not meet the threshold criterion of overall protection of human health and the environment, they are not discussed with respect to the other selection criteria below.

All of the other alternatives are protective of human health and the environment. Alternatives S12 through S15 prevent exposure to contaminated soil that exceeds the Level 1 PRGs by either covering it with clean soil or by excavating it from OU7 properties, and then disposing of the soil off-site or burying and covering it in a soil consolidation area in OU1 or OU2.

11.3 Compliance with ARARs and TBCs

Compliance with ARARs addresses whether a remedy will meet all Federal and more stringent state environmental and facility siting standards, requirements, criteria, or limitations, unless a waiver is invoked.

LLBO has notified EPA of its HSCA, which establishes contamination clean up levels within the Reservation, as well as three Leech Lake Reservation Business Committee Resolutions

amending or relating to HSCA for consideration as potential ARARs for this remedial action: No. 05-16 (July 15, 2004), No 2009-11 (July 9, 2008), and No. 2015-27 (August 7, 2014). EPA has a long-standing policy position under which tribal provisions may be considered as potential ARARs. See e.g., 55 Fed. Reg. 8666, 8741-42 (March 8, 1990). See also OSWER-OERR, ARARs Q's and A's, Publication No. 9234.2-01/FS-A (July 1991); CERCLA Compliance with Other Laws Manual, EPA/540/G-89/009 (August 1989), at 7-1; CERCLA/SUPERFUND Orientation Manual, OSWER-TIO, EPA/542/R-92/005 (October 1992), Section VIII, at VIII 1-7; Compendium of CERCLA ARARs Fact Sheets and Directives EPA Publ. No. 9347.3-15, Ch. III, "Indian Tribal ARARs"; Indian Tribal Involvement in the Superfund Program, OSWER 9375.5-02/FS (Fall 1989), at 1-2.

As noted in Sections 9.1 and 11.2 above, EPA has identified the Level 1 PRGs, which correspond to the HSCA's soil dioxin cleanup level, as protective of human health and the environment. Therefore, remedial alternatives that meet the overall protection of human health and the environment criterion will also meet the HSCA dioxin cleanup level. Regardless of whether the HSCA standard is an ARAR, EPA has determined that it is appropriate to consider this standard as a TBC, which will ensure protectiveness of human health and the environment.

With respect to the three LLBO Resolutions amending HSCA, EPA does not consider them on their own or in the context of HSCA to be either "applicable" or "relevant and appropriate." Resolution 05-16 requests that EPA comply with the Land Acquisition Policy when cleaning up the St. Regis site. Resolution 2009-11 states the Tribal Council's position that EPA should conduct further site characterization activities at the St. Regis site in support of LLBO's Land Acquisition Policy. The "Letter Health consultation," adopted by Resolution 2015-27, provides a location-specific sampling protocol for residential properties within the St. Regis site. Because each of these resolutions pertain specifically to the St. Regis site, EPA cannot determine that any of these resolutions is a statute of general applicability.

Alternatives S12, S13, S14 comply with all TBCs and ARARs by means of a combination of excavation and a soil cover; Alternative S15 meets TBCs and ARARs by excavation of contaminated soil exceeding the Level 1 PRG.

11.4 Long-term Effectiveness and Permanence

Long-term effectiveness and permanence refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once clean-up levels have been met. This criterion includes the consideration of residual risk that will remain onsite following remediation and the adequacy and reliability of controls.

Alternatives S12 through S15 vary in the degree to which they rely on compliance with ICs and long-term stewardship in perpetuity to ensure protectiveness. Alternatives S12 through S14 would require that covered properties in OU7 have ICs and long-term stewardship activities to ensure that the soil cover remains protective. Any potential future excavation in the cover areas would require work plans for proper sampling and disposal of excavated soil at depth in addition to repair and continued maintenance of the cover. Ensuring the implementation and effectiveness of ICs is more difficult with greater numbers of property owners, so greater compliance with ICs would be expected than with S14. However, Alternative S15 would require no long-term

stewardship of OU7 properties because all contamination above the HSCA cleanup level would be removed from OU7, so S15 is expected to have the greatest long-term effectiveness.

Off-site disposal alternatives (the “A” alternatives) require less long-term stewardship than the on-site (“B”) disposal alternatives. However, features of the on-site consolidation area, such as being sited on PRP-owned property, excluding soil that poses a leaching threat, and use of a thick clean cover on top of the consolidated soil, would confer a high degree of reliable long-term protectiveness to the on-site alternatives.

11.5 Reduction of Toxicity, Mobility, or Volume through Treatment

Reduction of toxicity, mobility, or volume through treatment refers to the anticipated performance of the treatment technologies that may be included as part of a remedy.

None of the proposed alternatives reduce the toxicity, mobility, or volume of the soil contaminants through treatment. The large volume of relatively low-level soil contamination that is being addressed in this remedy does not lend itself to treatment.

11.6 Short-term Effectiveness

Short-term effectiveness addresses the period of time needed to implement the remedy and any adverse impacts on human health and the environment that may be posed to workers, the community and the environment during construction and operation of the remedy until cleanup goals are achieved.

Table 14 lists the short-term impacts that are estimated to result from each remedial alternative. Greater volumes of excavated soil, and off-site disposal, correlate with more truck trips, which increases risk of a truck-related fatality, and may increase risks to workers performing the remedial action. Therefore, the “A” alternatives have greater short-term risks to the community and workers performing the remedial action than the correlating “B” alternatives.

Table 14: Short-Term Impacts of the Remedial Alternatives

| Alternative | | Time to reach RAOs | Excavated soil volume, cu. yd | Truck trips (at 15 cu. yd/ truck) |
|-------------|---|--------------------|-------------------------------|-----------------------------------|
| S10 | | N/A | 0 | 0 |
| S11 | A | 1 year | 36,800 | 4,910 |
| | B | 1 year | 36,800 | 668 |
| S12 | A | 2 years | 36,800 | 6,710 |
| | B | 2 years | 36,800 | 1,780 |
| S13 | A | 2 years | 24,900 | 5,280 |
| | B | 2 years | 24,900 | 1,360 |
| S14 | A | 2 years | 67,400 | 10,000 |
| | B | 2 years | 67,400 | 1,470 |
| S15 | A | 3 years | 111,100 | 14,800 |
| | B | 3 years | 111,100 | 7,530 |

11.7 Implementability

Implementability addresses the technical and administrative feasibility of a remedy from design through construction and operation. Factors such as availability of materials and services, administrative feasibility, and coordination with other governmental entities are also considered.

All of the alternatives can be readily implemented, although implementing alternatives with larger amounts of soil for off-site disposal are more difficult due to the limited amount of appropriate landfill space available in Minnesota. The difficulty of implementation also correlates with the aerial extent and number of properties for which compliance with ICs and long-term stewardship of contaminated soil managed in place is needed.

11.8 Cost

This criterion includes total estimated costs, including capital and present-worth annual O&M costs.

The costs for Alternatives S12 through S15 range from \$11.4 to \$30.0 million, with greater costs correlated with greater volumes of excavation and use of off-site disposal of excavated soil. The cost for soil transportation by rail instead of trucks for the “A” Alternatives was considered and was estimated to be more costly than truck transportation. Therefore, the costs for rail transportation are not presented.

Table 15: Comparison of Estimated Total Costs³⁸

| Alternative | Cost (Millions) | |
|-------------|-----------------|--------|
| | A | B |
| S10 | \$0 | \$0 |
| S11 | \$12.0 | \$9.3 |
| S12 | \$14.3 | \$11.4 |
| S13 | \$13.6 | \$11.8 |
| S14 | \$22.5 | \$18.0 |
| S15 | \$30.0 | \$21.4 |

11.9 Tribal Acceptance and State Acceptance

LLBO objects to EPA’s preferred Alternative, S15-B, because LLBO opposes moving the excavated soil from OU7 to a different location on site. LLBO supports Alternative S15-A, excavation of all soil that exceeds the Level 1 PRGs and disposal of the excavated soil off of the Leech Lake Reservation. LLBO has noted in communications to EPA that it believes that alternatives that involve a cover or that manage contaminated soil on site (Alternatives S12, S13,

³⁸ Costs may differ slightly from those presented in the FS Report due to differences in rounding, and costs for the “B” alternatives are between 14-17 percent greater than those presented in the Proposed Plan due to the addition of the costs of the soil consolidation area. See the Administrative Record, October 16, 2016 *Memo to File re: Costs for OU7 Remedy - Proposed Plan of 3/2016*.

S14, and S15-B) are not consistent with HSCA or the federal government's trust responsibility. Additional description of LLBO's concerns and EPA's consideration of the concerns are provided in Part III of this document. LLBO's letter on the draft ROD can be found in Attachment B, and several documents authored by LLBO are identified in the Administrative Record Index which is found in Attachment C. Section II.4 provides additional information on LLBO's involvement and participation in the soil FS and remedy selection processes, both as EPA's support agency partner and as a sovereign tribal government.

The State of Minnesota concurs with the selection of Alternative S15-B because it will meet or exceed cleanup levels established for residential property for all of OU7, it will achieve the remedial action objective for OU7 by excavating and removing contaminated soil and replacing it with clean soil, and because no institutional controls would be required on the residential properties post-remediation. The State's comments note the potential of recontamination from unremediated adjacent OUs, request sampling until those OUs are remediated, and request State involvement in remedial design and remedial action implementation. MPCA's letter on the draft ROD can be found in Attachment B.

11.10 Community Acceptance

EPA received numerous written and oral comments on the 2019 Proposed Plan. The majority of the commenters prefer Alternative S15-A, because it would remove all soil contaminated above the HSCA cleanup level for dioxin to a landfill located outside of the Leech Lake Reservation.

12 Principal Threat Wastes

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site whenever practicable (NCP Section 300.430(a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. Source material is defined as material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for the migration of contamination to groundwater, to surface water, to air, or act as a source for direct exposure. Principal threat wastes are those source materials considered to be highly toxic or highly mobile and cannot be reliably contained, or would present a significant risk to human health and the environment should exposure occur.

The statutory preference for treatment of principal threats does not apply for this remedy, because there is no known principal threat waste in the soil above the water table being addressed in this remedial action. The greatest potential future ELCR in OU7 is 7×10^{-5} (see Table 6), and the greatest potential future non-cancer risk in OU7 is a HI of 2 for a potential future child resident at one property (Table 7). These levels of risk, combined with the overall low leaching threat posed by the soil being addressed in this remedial action, are representative of low level threat waste.

13 Selected Remedy

13.1 Summary of the Rationale for the Selected Remedy

EPA selects Alternative S15-B as the best balance of the nine evaluation criteria. Under Superfund law, the selected remedy must meet the threshold criteria of Overall Protection of

Human Health and the Environment, and Compliance with ARARs. Alternative S15-B meets these threshold criteria by excavating soils in OU7 to the Level 1 PRGs, which meets the dioxin standard for soil specified in HSCA as a TBC. ICs and engineering controls will protect the soil cover on the soil consolidation area to prevent exposure to the consolidated soil.

In addition to meeting the two threshold criteria, the selected remedy must be evaluated by assessing the five balancing criteria. Alternative S15 provides reliable long-term and permanent protection against exposure to site-related contaminants by excavating contaminated soil from all residential properties. Alternatives S12 through S14 are less reliable in long-term protectiveness because soil exceeding the Level-1 PRGs would remain on some OU7 properties underneath a soil cover that could be disturbed. By managing the excavated soil in an industrial/commercial area that can be reliably protected by ICs and engineering controls, S15-B is similar in long-term effectiveness to S15-A.

None of the alternatives reduce toxicity, mobility or volume of the contamination because effective alternative treatment technologies or resource recovery technologies are not practical for large quantities of soil containing low levels of contamination. However, all of the alternatives will prevent contaminated soil from becoming airborne or tracked inside homes, by either disposing of the soil off-site or managing it at depth under a geomembrane and clean soil cover, thereby reducing the mobility of the contaminants.

Alternative S15-B is on the high end of short-term risks of the alternatives selected but poses less short-term risk than S15-A. Alternative S15-B is the most implementable remedy because it does not rely on residents complying with ICs, or on the availability of landfill space. Finally, Alternative S15-B provides a high degree of long-term protectiveness at a much lower cost than Alternative S15-A.

In summary, Alternative S15-B meets the two threshold criteria of Overall Protection of Human Health and the Environment, and Compliance with ARARs. It is comparable to Alternative S15-A in terms of Long-Term Effectiveness and Permanence, but is more protective in the short term due to less truck traffic. It is more implementable than S12, S13 and S14 due to fewer ICs, and the cost for Alternative S15-B is considerably less than for Alternative S15-A.

13.2 Description of Remedial Components

13.2.1 Excavation of the Residential Properties

Contaminated soil would be excavated on all OU7 properties that have surface soil dioxin values greater than 10 ppt and B(a)PE values greater than 1.6 ppm. Based on previous investigations, it is estimated that background concentrations for the COCs will be reached on most residential properties within 12-24 inches of excavation depth, but some properties may require excavation below that depth to achieve soil cleanup levels. After excavation, clean dirt fill and topsoil will be placed on the property until the property reaches its pre-existing grade. Vegetation will then be installed to replace, as closely as practicable, pre-existing vegetation.

13.2.2 Onsite Consolidation of Excavated Soil

Excavated soil will be consolidated in a soil borrow area on-site in OU1 or OU2. The on-site borrow area will be excavated to furnish a portion of the clean soils for excavation backfill. Excavated soils from OU7 will be placed at the bottom of the borrow area and the borrow area will be covered with two feet of clean soil cover including at least six inches of topsoil. After construction, the consolidation/borrow area will continue to look like a flat, vacant vegetated field with no appreciable increase in final grade, reducing concerns with visual impacts and better positioning the area for potential future industrial/commercial development.

13.2.3 Institutional Controls

The selected remedy will require ICs only on the soil consolidation area to notify future owners, prevent unauthorized digging, and limit use of the on-site consolidation area.

13.2.4 Five-Year Reviews

Since wastes will be left on-site above levels that allow for unlimited use and unrestricted exposure as part of the selected remedy, CERCLA and the NCP require periodic reviews of the remedy. A comprehensive statutory review will be conducted at least every five years from the start of the remedial action to evaluate the protectiveness of the remedy. The purpose of these Five-Year Reviews is to evaluate the implementation and performance of the remedy in order to determine if the remedy is or will be protective of human health and the environment. The Five-Year Review will document recommendations and follow-up actions as necessary to ensure long-term protectiveness of the remedy or bring about protectiveness of a remedy that is not protective.

13.3 Summary of Estimated Remedial Costs

The total estimated cost of the selected remedy is \$21.4 million. A summary table of the major capital and annual operation, maintenance, and monitoring cost elements for each component of the selected remedy is shown in Table 16.

The information in this cost estimate summary table is based on the best available information regarding the anticipated scope of the remedial alternative. The values may differ slightly from those found in the Proposed Plan and the Supplemental FS Report due to rounding, and due to the addition of the costs of excavating, covering, and maintaining the soil consolidation area. Changes in the cost elements are likely to occur as a result of new information and data which may be obtained during the pre-design phase. This is an order-of-magnitude engineering cost estimate that is expected to be within +50 to -30 percent of the actual project cost.

13.4 Expected Outcomes of the Selected Remedy

The expected outcome of the selected remedy is that soil in OU7 will not pose an unacceptable potential future risk to residents. The properties in OU7 will be protective of residential or any other use. The interim remedy currently being implemented will no longer be needed to control current exposure to contaminated soil and dust in OU7, but some or all elements may be needed to ensure that recontamination from adjacent OUs does not occur, until those OUs are addressed

by a remedial action. Groundwater contamination continues to be addressed by the groundwater pump and treatment system previously installed and currently operated by IP. The OU7 remedial action does not address principal threat waste, and the remedy is expected to have no effect on the duration of groundwater restoration.

Table 16: Cost Estimate Summary for the Selected Remedy

| Description | Quantity | Unit | Unit Cost | Total |
|---|----------|------------|-----------|---------------------|
| Site Preparation | 19 | properties | \$5,000 | \$95,000 |
| Sampling | 554 | samples | \$2,000 | \$1,108,000 |
| Soil Consolidation Area | 14.5 | acres | - | \$2,300,135 |
| Excavate, stockpile and load soil (Type 1) | 46,633 | tons | \$110 | \$5,129,630 |
| Excavate, stockpile and load soil (Type 2) | 120,056 | tons | \$12 | \$1,440,672 |
| Transport soil to temporary stockpile area for consolidation onsite | 109,373 | CY | \$2.50 | \$273,433 |
| Place contaminated soil in consolidation area | 109,373 | CY | \$2.50 | \$273,433 |
| Transport and dispose of soil as hazardous waste | 2,630 | tons | \$740 | \$1,946,200 |
| Load and transport clean borrow soil for use as clean cover | 83,621 | CY | \$1.60 | \$133,794 |
| Place on-site clean borrow soil | 83,621 | CY | \$2.50 | \$209,053 |
| Place on-site clean borrow soil | 83,621 | CY | \$2.50 | \$209,053 |
| Borrow soil purchase, placement and compaction | 4,570 | CY | \$21.50 | \$98,255 |
| Topsoil purchase and placement | 22,936 | CY | \$33.50 | \$768,356 |
| Seeding and mulching of topsoil | 28.4 | acre | \$2,600 | \$73,840 |
| Topsoil and borrow soil analysis | 28 | each | \$2,000 | \$56,000 |
| Grade ground surface to provide adequate drainage | 28.4 | acre | \$2,000 | \$56,800 |
| Vegetation maintenance (first year) | 28.4 | acre | \$1,500 | \$42,600 |
| Mobilization/demobilization | 1 | LS | \$849,114 | \$849,114 |
| Subtotal Capital Costs | | | | \$ 17,634,538 |
| Contingency (20%) | | | | \$ 3,526,908 |
| Total Capital Cost | | | | \$ 21,161,445 |
| Annual O&M cost | | | | \$18,510 |
| 30 years of annual costs, present value, 7% discount ³⁹ | | | | \$229,691 |
| Total Present Value of Capital and O&M Costs | | | | \$21,391,136 |

14 Statutory Determination

The remedial action selected for implementation at the St. Regis site is consistent with CERCLA and the NCP. The selected remedy is protective of human health and the environment; will comply with ARARs; is cost-effective; and utilizes permanent solutions and alternate treatment technologies or resource recovery technologies to the maximum extent practicable. The remedy in this OU does not satisfy the statutory preference for treatment as a principal element of the

³⁹ The costs differ slightly from those presented in the FS Report due to the inclusion of soil consolidation area O&M costs. Annual O&M costs of \$13,250 were calculated from the following cost assumptions identified in Appendix F of the FS Report: \$500/year per acre for maintenance of a 14.5-acre soil consolidation area; \$7,500/year per acre for maintenance of 2 percent of the vegetative cover of the 14.5-acre soil consolidation; \$1,000/year for maintenance and replacing of signs; and \$5,000/year for reporting. The annual O&M costs are projected for 30 years and subject to a 7 percent discount. The October 12, 2016 memorandum to the site file, included in the Administrative Record for this ROD, details cost calculations for the OU7 alternatives. See <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.ars&id=0503781&doc=Y&colid=3667®ion=05&type=AR>; or navigate to www.epa.gov/superfund/st-regis-paper; click on "Site Documents & Data", and then "Administrative Records".

remedy because of the lack of commercially available technologies to treat dioxins and high-molecular-weight PAHs at the relatively low concentrations present in OU7 soil.

14.1 Protection of Human Health and the Environment

The selected remedy will protect human health and the environment by eliminating, reducing, or controlling exposures to human health receptors through excavating contaminated soil from residential properties and consolidating it under a clean cover protected by engineering controls and ICs. The selected remedy will reduce potential human health risk levels to within EPA's acceptable cancer risk range and below EPA's acceptable HI of 1. The remedy will comply with ARARs and implementation will not pose any unacceptable short-term risks.

14.2 Compliance with Applicable or Relevant and Appropriate Requirements

The selected remedy will comply with all ARARs that pertain to the site. The ARARs for the selected remedy are listed and described in the table in Attachment A to this ROD. The selected remedy will meet the LLBO HSCA as a TBC, which establishes contamination clean up levels within the Reservation. See also Section II.11.3.

14.3 Cost-Effectiveness

In making this determination, the following definition was used: "A remedy shall be cost-effective if its costs are proportional to its overall effectiveness." (NCP §300.430(f)(1)(ii)(D)). This was accomplished by evaluating the "overall effectiveness" of those alternatives that satisfied the threshold criteria (i.e., were both protective of human health and the environment and ARAR-compliant). Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination (long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness.) Overall effectiveness was then compared to costs to determine cost-effectiveness.

Alternative S15-B has the best overall effectiveness of the alternatives. It has significantly better long-term effectiveness than Alternatives S12, S13, and S14 because it relies less on long-term maintenance and securing ICs on numerous properties within Indian Country, where jurisdiction to enforce ICs is complex. Compared to S15-A, it has better short-term effectiveness, and similar long-term effectiveness because only one land use restriction will be needed for the soil consolidation area. The Selected Remedy has an estimated present worth cost of \$21,400,000. The relationship of the overall effectiveness of Alternative S15-B was determined to be proportional to its costs and hence this alternative represents a reasonable value for the money to be spent.

14.4 Utilization of Permanent Solutions and Alternative Treatment Technologies (or Resource Recovery Technologies) to the Maximum Extent Practicable

EPA has determined that the Selected Remedy represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a practicable manner at the site. Of those alternatives that are protective of human health and the environment and comply with ARARs, EPA has determined that the Selected Remedy provides the best balance of trade-offs in terms of the five balancing criteria, while also considering the statutory preference for

treatment as a principal element and bias against off-site treatment and disposal and considering State and community acceptance.

The Selected Remedy permanently removes contaminated soil from OU7, so long-term maintenance and ICs are not needed for any residential properties. The soil will be managed on PRP-owned property, where limited engineering controls and ICs will be needed. The selected remedy has fewer short-term risks to the community and to workers than the “A” alternatives, while avoiding off-site disposal.

14.5 Preference for Treatment Which Permanently and Significantly Reduces the Toxicity, Mobility, or Volume of the Hazardous Substances as a Principal Element

None of the soil addressed in this remedial action constitutes principal threat waste at the site, so the preference for treatment of principal threat waste does not apply.

14.6 Five-Year Review Requirements

Because this remedy will result in hazardous substances remaining on-site above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years after initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment. The purpose of the five-year reviews is to evaluate the implementation and performance of the remedy in order to determine if the remedy is or will be protective of human health and the environment. The five-year review will document recommendations and follow-up actions as necessary to ensure long-term protectiveness of the remedy or bring about protectiveness of a remedy that is not protective.

15 Documentation of Significant Changes

EPA previously issued a Proposed Plan in 2011 for soil in OU7 and three additional OUs, which proposed excavation of soil above cleanup levels to a maximum depth of two feet in OU7. EPA subsequently issued a Proposed Plan in 2016 for OU7 only, which proposed Alternative S14-B based on finding the LLBO’s HSCA to be an ARAR for the remedial action. In 2019, EPA issued a revised Proposed Plan for OU7 to solicit comments on the revised rationale for selecting Alternative S14-B.

EPA presented the 2019 Proposed Plan for site soil remediation at a public meeting held on July 30, 2019. The selected remedy documented in this ROD includes all of the features of the preferred remedy described in the 2019 Proposed Plan: excavation of the residential properties, management of the soil on PRP-owned property, and five-year reviews. EPA reviewed all written and verbal comments submitted during the public comment period. It was determined that no significant changes to the remedy, as originally identified in the Proposed Plan, were necessary.

PART III THE RESPONSIVENESS SUMMARY

1 Comments about Selection of Cleanup Levels

Comment 1: *IP agrees with EPA's conclusion that the tribal HSCA ordinance is not an ARAR for the Site.*

Response

EPA has not concluded that the dioxin cleanup level for soil specified in HSCA is not an ARAR. As noted in Part II, Sections 9.1 and 11.3 of the ROD, EPA has not reached any ARAR determination regarding the HSCA. As described in Section 6.1 of the Proposed Plan and Part II, Section 11.3 of the ROD, because EPA must select one of the alternatives that meets the overall protection of human health and the environment, and those alternatives also meet the HSCA cleanup level for dioxin in soil, it is not necessary to make a final determination on the HSCA standard as a potential ARAR.

Comment 2: *The cleanup levels in the tribal HSCA ordinance lack an appropriate technical foundation, were adopted out of context from non-U.S. sources ill-suited to the CERCLA process, are not of "general applicability" across the reservation, are not enforceable against non-tribal members, were developed without consideration of due process, and are contradicted by the site-specific HHERA. Therefore EPA should not conclude that the tribal HSCA ordinance is a requirement "to be considered" (TBC) for the Site or that the HSCA clean-up levels are an appropriate consideration.*

Response

EPA's selection of the Level 1 PRGs as providing the appropriate level of protection of human health and the environment is consistent with 40 CFR 300.430(e)(2)(i)(A)(2), which directs EPA to use a 10^{-6} ELCR as the point of departure for establishing remediation goals and acceptable exposure levels. The dioxin concentration associated with a 1×10^{-6} ELCR, 6.3 ppt, is based directly on the findings of the HHERA and is developed further in Appendix B of the Supplemental FS Report (see especially Table 1 of Appendix B). However, EPA generally does not set cleanup goals below site-specific background concentrations, which in this case is 7.5 ppt for dioxin. Therefore, in setting the Level 1 PRG at a 10^{-6} ELCR, the 10 ppt HSCA cleanup level is a useful TBC under the circumstances presented at OU7 to ensure protectiveness of human health for this specific OU. Consistent with the NCP (e.g., 40 CFR §300.400(g)(3) and 40 CFR §300.5), the TBC category consists of advisories, criteria, or guidance that may be useful in developing CERCLA remedies. TBCs are not subject to the same eligibility requirements as are ARARs, consistent with 40 CFR 300.400(g). See Part II, Sections 9.1 and 11.3 of the ROD.

Comment 3: *Section 121(d) (42 U.S.C. § 9621(d)) provides that cleanup standards must be identified as part of the remedial plan and that potential ARARs include only Federal and State standards. Nowhere does it include standards promulgated by "Indian Tribes," a defined term in CERCLA (§ 9601(36)). Indian Tribes are not included in the definition of "State" (§ 9601(26)) and are defined separately (§ 9601(36)). Furthermore, another section of CERCLA (§ 9626), as part of the*

1986 amendments to CERCLA, explicitly provides specific instances in which an Indian Tribe is accorded substantially the same treatment as a State under certain provisions of CERCLA. None of the enumerated sections or subsections set forth in Section 126 refer directly or indirectly to the provisions of Section 121(d). EPA inappropriately reviewed “federal and tribal” regulations for ARARs instead of “federal and state” regulations for ARARs, as required by CERCLA Section 121(d). EPA’s evaluation, and ultimate selection, of remediation options that include application of the HSCA is not supported by CERCLA. Accordingly, attribution of ARAR status to the HSCA is legally erroneous.

Response

EPA has not concluded that the dioxin cleanup level for soil specified in HSCA is an ARAR. As noted in Part II, Sections 9.1 and 11.3 of the ROD, EPA has not reached any ARAR determination regarding the HSCA.

Comment 4: *EPA has failed to provide an analysis of whether the ordinance is actually “applicable” or “relevant and appropriate” as related to all of OU-7. Longstanding case law confirms that tribal law is inapplicable to nonmembers absent certain, narrow, exceptions that tribes have the burden of proving. Plains Commerce Bank v. Long Family Land and Cattle Co., Inc., 554 U.S. 316, 330 (2008); U.S. v. Montana, 450 U.S. 544, 565 (1981). No documentation has been provided concerning the Leech Lake Band of Ojibwe’s proof of a narrow exception or EPA’s own evaluation and analysis of how it has reached the conclusion that the HSCA is an ARAR for purposes of CERCLA remediation of the Site.*

Response

See the Response to Comment 3.

Comment 5: *Application of the HSCA to the Site cleanup level is also inappropriate because the procedure by which it was promulgated did not provide meaningful input from affected parties. Generally, rulemaking requires compliance with the Administrative Procedures Act (“APA”), 5. U.S.C. § 551-559. The EPA must proceed under CERCLA in accordance with the APA in applying cleanup standards at the Site. This means that standards enacted or promulgated under Federal or State law must allow for input from interested parties, and the process by which enactment or promulgation occurs must pass muster under prescribed procedural protections. The HSCA defies these principles.*

Response

See the Response to Comment 3.

Comment 6: *Use of HSCA as a guidance is inconsistent with Constitutional principles.*

Response

The Commenter has not noted which Constitutional principles are allegedly at issue in its comment, so EPA cannot directly evaluate and respond to it. However, federal courts have repeatedly found that CERCLA is consistent with the Constitution. EPA also notes that, consistent with the NCP (e.g., 40 CFR §300.400(g)(3) and 40 CFR §300.5), the TBC category consists of advisories, criteria, or guidance that may be useful in developing CERCLA remedies. TBCs are not subject to the same eligibility requirements as are ARARs, consistent with 40 CFR 300.400(g). See Part II, Sections 9.1 and 11.3 of the ROD.

Comment 7: *EPA's indication that it will take final agency action on the tribal HSCA ordinance as an ARAR as part of the ROD jeopardizes the entire remedial process. EPA's delaying a final decision effectively deprived the PRPs and all stakeholders of effectively addressing objections and considering options that should have been available during the Supplemental FS process.*

Response

See the Response to Comment 3.

Comment 8: *The application of a 1×10^{-6} level of protection is inconsistent with other cleanup decisions made in Minnesota. For instance, the South Minneapolis Arsenic Site is proposed for delisting from the NPL. This residential cleanup involved excavation of soils above an arsenic concentration of 25 mg/kg in the top 12 inches (18 inches in garden areas) and above 95 mg/kg below 12 inches (18 inches in garden areas). The shallow soil cleanup level represented a 1×10^{-4} excess cancer risk and the 95 mg/kg cleanup level was based on an acceptable acute risk level. The cleanup levels at this site represent more typical cleanup levels used by EPA in other residential areas and indicates that the much more stringent cleanup level (100x more stringent) being applied at the St. Regis Paper Company Site is inconsistent with other EPA actions for residential areas in Minnesota.*

Response

Decisions made at other sites are not necessarily dispositive or precedential. Site-specific conditions form the basis for selecting final remedial goals, including whether it is appropriate to modify PRGs from EPA's 10^{-6} ELCR point of departure. The selection of the Level 1 PRGs is consistent with the NCP in using 10^{-6} ELCR as the point of departure within the acceptable 10^{-6} to 10^{-4} range. See, 40 CFR 300.430(e)(2)(i)(A)(2).

Comment 9: *EPA should adopt the LLBO HSCA as an applicable ARAR for this remedial action.*

EPA's adoption of the HSCA as an ARAR for this remedial action is essential to recognize the inherent sovereignty of the Tribe. As EPA is well aware, the Tribal cleanup standards in HSCA are based upon sound science, as is demonstrated by of EPA's selection of a 10 part per trillion Level 1 PRG for dioxin cleanup at the Site based on EPA's recent risk assessment, which is identical to the dioxin standard independently set forth in the HSCA.

EPA has explained how it arrived at the Level 1 PRG for dioxin in this remedial action. However, EPA has not provided sufficient justification for its reluctance to adopt the HSCA standard as an ARAR, as the HSCA is a promulgated and generally applicable environmental statute. EPA's recognition of the HSCA standard as an ARAR will further the development of the Tribe's regulatory program, maintain EPA alignment with the 1984 Indian Policy and the recognition that LLBO is a sovereign government empowered to set standards for cleanup of hazardous waste within the exterior boundaries of the Leech Lake Reservation.

Response

As described in correspondence from Superfund & Emergency Management Division (SEMD) Director Douglas Ballotti to LLBO Chairman, Faron Jackson, Sr., dated May 20, 2019, because the selected remedy will meet the 10 ppt dioxin standard for soil in HSCA, it is unnecessary to determine whether this standard is also an ARAR. EPA does not believe that its determination, which is grounded in CERCLA, can have an injurious effect on tribal sovereignty.

Comment 10: *Several commenters noted that EPA needs to clean the site up to background, and/or clean up all contamination and not just some.*

Response

The selected remedy removes contaminated soil from OU7 residential properties to the 10 ppt standard specified in LLBO's HSCA for dioxin, and to background for B(a)PE. The HSCA dioxin level is close to, but slightly above, background, and was determined to be the appropriate Level 1 PRG concentration in consultation with LLBO and other site stakeholders. Soil contamination in other OUs will be addressed in one or more separate Proposed Plans and RODs.

2 Comments about Fulfilling EPA's Nine Selection Criteria

Comment 11: *Several commenters stated that S15-A should be selected even though it is the most expensive alternative considered, or that cost-effectiveness is a "legalism" that should be disregarded.*

Response

CERCLA requires EPA to select cost-effective remedies. See, CERCLA Section 105(a)(7), 42 USC 9605(a)(7). As described in Section 14.3 of the ROD, Alternative S15-B better fulfills both the short-term effectiveness and cost criteria, with only a marginal reduction in the level of long-term effectiveness, so S15-B is more cost-effective than S15-A.

Comment 12: *Alternative 11B (excavation of soil based on HHERA and SFS) should have been selected because it the most cost-effective remedial alternative for OU7.*

Response

As described in Sections 9.1 and 11.2 of the ROD, EPA has determined that the Level 1 PRGs provide a level of overall protection of human health and the environment consistent with 40 CFR 300.430(e)(2)(i)(A)(2). Because Alternative S11 does not meet the threshold criterion of overall protection of human health and the environment, EPA cannot select it.

Comment 13: *Even if EPA applies a level of protection of 1×10^{-6} , Alternative 14B (covering of soil on International Paper property, excavation of soil on other property) is protective and should have been selected. International Paper believes the 1×10^{-5} level of protection is inappropriate. Even if EPA were to apply this level of protection for OU7, Alternative 14B should have been selected as the most cost-effective remedy. With the current level of International Paper's property ownership, Alternative 14B is significantly less costly than Alternative 15B (\$10.2 million for Alternative 14B compared to \$18.5 million for Alternative 15B or \$10.7 million vs \$20.1 million if all costs are considered). Both remedies are protective of human health and the environment as stated in EPA's June 2019 Proposed Plan.*

Response

As described in Section 11.4 of the ROD, Alternative S15 is expected to have the greatest long-term effectiveness. Utilizing on-site management of the excavated soil, as in Alternative S15-B, will increase implementability and reduce adverse short-term impacts from the remedial action. Therefore, Alternative S15-B is the most cost-effective alternative even though it costs more than Alternatives S12, S13 and S14.

Comment 14: *Alternative 15B (complete Site excavation) goes far beyond what is required to protect human health and the environment in OU7. Based on the findings of the site-specific HHERA, other remedial decisions in the region, land use restrictions that will be applied to International Paper's property in OU7, and planned future non-residential use in the rest of the area, there is absolutely no justification for complete Site excavation. An equal level of risk reduction and protection of human health is provided by either covering or excavating soils exceeding Preliminary Remediation Goals (PRG) and is an appropriate final remedy for soils in OU7.*

Complete excavation under Alternative 15B will not result in significant reduction in exposure or risks as compared to Alternatives 11, 12, 13 or 14 and cannot be justified. There are significant cost and environmental impacts associated with the remedy contemplated by Alternative 15B. Those costs and impacts would not result in a significant difference in total dioxin exposures and risks to residents and workers in OU7 relative to Alternatives 11, 12, 13, and 14, taking into consideration the important contribution of dietary sources of dioxin to total exposures.

The comparison of the alternatives shown in Table 8 unfairly shows the long-term effectiveness and permanence of Alternative 14B as "partially meets criterion." This depiction is inconsistent with the statement in the last sentence in the third paragraph of Section 8.1.3 of the June 2019 Proposed Plan that "there is a high degree of long-term effectiveness for soil cover as specified in Alternative S14, as well as the excavation specified in Alternative S15" and the first sentence in the second paragraph of Section 8.1.3 that "[b]oth a clean soil cover and excavation can permanently reduce exposure to soil contamination." Thus, the long-term effectiveness and permanence of Alternative S14 and S15 should both be "fully meets criterion." This is important since if this criterion is the same for both alternatives, Alternative 14B would be the most cost-effective alternative for OU7 (assuming that a dioxin PRG at an ELCR of 1.7×10^{-6} (10 ng/kg) is the appropriate clean up level for the Site) since it has a better short-term effectiveness and a much lower cost than Alternative 15B. As described above, the estimated cost of Alternative 14B with onsite consolidation/borrow is \$10.7 million and not \$15.4 million as shown in the June 2019 Proposed Plan. This is significantly less than the estimated cost of Alternative 15B of \$20.1 million.

Response

As described in Section 11.4 of the ROD, compliance with ICs and long-term stewardship procedures would be needed in perpetuity to ensure protectiveness to the Level 1 PRGs for Alternatives S12, S13 and S14. For the reasons described in Section 7 of the ROD, EPA anticipates that these properties will be used for residential housing. Because most of the properties are vacant, it is reasonable to assume that earthwork such as digging foundations, basements, etc., would occur as part of the housing construction process. Given these conditions, ensuring compliance with prohibitions on disturbing the soil will be difficult, and EPA has determined that removing soil that exceeds the Level 1 PRG from the OU7 properties will improve the reliability of long-term protectiveness at the site, and that Alternative S14 provides a lesser or partial fulfillment of the long-term protectiveness criterion.

EPA disagrees with the comment that because both excavation and clean soil cover may potentially confer a high level of long-term protectiveness, that they must be judged to confer the same level of long-term protectiveness. For the reasons stated above with respect to the expected residential use of the properties, and the need to disturb soil to construct homes, EPA finds that excavation of contaminated soil on OU7 properties will have greater long-term protectiveness than soil cover. See also the response to Comment 30.

For the portion of the comment regarding the estimated costs of S14B, see the response to Comment 58. For the portion of the comment regarding dietary sources of dioxin, see the response to Comment 59.

Comment 15: *Since the HSCA should not have been identified as an ARAR for non-tribal property, Alternative 11B is the most cost-effective remedial alternative for OU7 (and for OU1 and OU2).*

Response

EPA is not designating the dioxin cleanup level in HSCA as an ARAR, as the comment suggests. See Part II, Sections 9.1 and 11.3 of the ROD. With respect to the comparative cost-effectiveness of the alternatives, see Section 14.3 of the ROD and the response to Comment 13.

Comment 16: *Construction of the remedy under Alternative 15B is anticipated to take at least 3 years, which will create significant short-term community impacts including regular traffic disruption, noise, and dust generation. None of these concerns are adequately described or considered in the Proposed Plan, depriving reviewers and stakeholders of the opportunity to fully consider and comment on the magnitude of these factors. EPA has effectively dismissed several important CERCLA evaluation criteria and has deprived the public of a reasonable opportunity to understand and make meaningful judgments on the significant tradeoffs that exist among the various remedial alternatives. This failure defeats the fundamental purpose of the Proposed Plan, which, according to the NCP, "is to supplement the RI/FS and provide the public with a reasonable opportunity to comment on the preferred alternative for remedial action, as well as alternative plans under consideration, and to participate in the selection of remedial action at a site." (40 CFR 340(f)(2)).*

Additionally, as documented in the 2015 SFS and as described in the June 2019 Proposed Plan, the scope and duration of the transportation phases of the work under Alternative 15B will result in risks of injury or fatal accidents with the truck traffic. These risks are significantly greater than the reduction of risk to human health and the environment that would be achieved by the cleanup itself. Further, an estimated 1,328 tons of criteria pollutants would be generated by the estimated truck activity required to transport soil to/from the Site. This is equivalent to the pollutants generated to serve the electrical power needs of a community of about 200 people for a year.

Response

In EPA's experience at numerous sites requiring excavation of residential soil, it is possible to mitigate dust, noise and traffic impacts to acceptable levels. Therefore, EPA views the short-term effectiveness of the selected remedy as moderate, and presented it as "partially meets criterion" in the Proposed Plan (see Table 8).

EPA compared the short-term effectiveness of the various remedial alternatives in Part II, Section 8.1.5 of the Proposed Plan. This section explicitly connects greater volumes of excavation, such as in the selected remedy, with increased risks to workers and to the community, including greater numbers of truck trips and a higher fatality risk due to increased truck traffic. It also explicitly describes the anticipated three-year implementation timeframe. Therefore, EPA disagrees that the public was not presented with information on the short-term

impacts to the local community. Part II, Section 11.6 of the ROD also discusses the short-term protectiveness.

EPA also notes that no-action alternatives, which by definition have no construction activities or transportation, always have the least short-term construction risks in any comparison of remedial alternatives. This is not a basis for avoiding selecting an active remedy as authorized under CERCLA to mitigate unacceptable threats to human health and the environment from releases of contaminants.

Comment 17: *Further, the June 2019 Proposed Plan for OU7 continues to gloss over very significant differences among the alternatives that were documented in the 2015 SFS, in particular by focusing primarily on truck traffic. The focus only on truck traffic sheds no light on the other serious implementation challenges and short-term environmental impacts associated with EPA's preferred Alternative 15B compared to Alternative 11B. For example, Alternative 15B would require excavating soil from an estimated 13 privately owned (non-International Paper or non-City owned) parcels in OU7. Alternative 11B would require excavation on far fewer privately owned properties (estimated to be only two or three). This is despite the fact that there is no data supporting sufficient risk to warrant such action. One major implementation challenge will be obtaining access to these residential properties in this regard. It was International Paper's experience in the 2006 interim action that several property owners were hesitant to provide access for the interim actions, a considerable amount of negotiation was required, and still not everyone agreed to provide access.*

Response

In EPA's experience at other residential soil sites, gaining access agreements and digging on residential properties can be a challenging process, but has been demonstrated to be implementable. OU7 has far fewer property owners and structures than many other Superfund residential soil excavation sites, and EPA has had ample opportunity to study the risks to the site under different remedial alternatives, so there is a good basis for determining that implementation of the remedy in OU7 is fully possible.

Comment 18: *Looking at the safety patterns of this and how the risk is being weighed; they're saying keep this onsite, because if we ship it off, the risk the fact of people crashing for a short period time while it's on the road, but you can drive a truck here and move the sand all over the place, when you have the townhouses on Grant and Utley walking up and down the road, people traveling, but it's okay to drive those trucks on the Reservation for that short amount of time. So, you're doubling the risk, but keeping that soil there.*

Response

The expected outcome of the selected remedy is that both the cancer and non-cancer risks from exposure to soil in OU7 will be reduced for on-site residents, while also providing a lower risk of short-term impacts to the community, including those due to additional traffic, than alternatives

that call for off-site disposal of the soil. See also Sections II.11.2, II.11.4, and II.11.6 of the ROD.

3 Comments about Disposal/Storage of Excavated Soil

Comment 19: *IP supports the use of an on-site consolidation area to dispose of the soil and as a source of clean fill to backfill the excavations and requests that the EPA consider this a final agency action for the OU7 soils.*

Response

This ROD for OU7 does not address a remedy for OU1 or OU2, therefore soil consolidated and stored in OU1 or OU2 will be subject to remedy selection in these areas at a later time. As described in the Supplemental FS Report and Section 10.1 of the ROD, the soil consolidation area is assumed to be a source of clean fill.

Comment 20: *If soil stored on-site will require further remediation, DNR recommends providing an estimated timeline of future remediation activities.*

Response

EPA is not selecting a remedy for OU1 or OU2 in this ROD, so soil consolidated and stored in OU1 or OU2 will be subject to remedy selection in these areas. See also the response to Comment 33.

Comment 21: *If the proposal to manage the majority of contaminated soil within an on-site facility moves forward, DNR requests further information about the potential location of this on-site soil storage and level of toxicity to be stored on-site to provide detailed comments. However, generally DNR recommends proposed soil storage location be sufficiently located away from wetlands and waterbodies as well as people and businesses.*

DNR also recommends further details in on-site soil storage area design as well as details on how this area will be monitored to ensure no future contamination leaves this facility through surface and groundwater or by wind.

Response

The areas that would be considered for onsite consolidation are currently owned by PRPs and used for either railway setback or for operations and maintenance of the RCRA containment unit. See Figures 4-1 and 4-2 of the Supplemental FS Report for the conceptual design of the soil consolidation area. As a general rule, surface runoff and wind are not capable of moving soil that is covered by both a geotextile barrier and one or more feet of clean soil with a vegetated cover. In addition, due to the flat geomorphology of the region and long-term stewardship of the soil consolidation area, erosion of the cover such that the consolidated soil would be exposed over time is not expected.

Specific design criteria to determine the thresholds for disposing of soil off-site rather than consolidating it on-site will be developed during remedial design. However, site data indicate

that the dioxin contamination in OU7 soil is strongly adhered to the soil and is not measurably or significantly leaching into groundwater. Once the excavated soil is placed in the consolidation area and covered, the transport mechanisms of concern for the dust reduction interim remedial action (foot and vehicle tracking, wind deposition) will be prevented. Because significant leaching is not expected on either a theoretical basis given the hydrophobic nature of dioxin/furan congeners, or based on site data, EPA has confidence that on-site consolidation above the water table can be accomplished without increasing mobility of the contamination.

Comment 22: *Because the Proposed OU-7 ROD does not define "highly contaminated soils" as those soils exceeding the HSCA standard and does not provide any assurance that the stockpiled consolidated contaminated soils will be removed from the Reservation, the Tribe cannot support the Proposed OU-7 ROD. EPA has indicated to the Tribe that a future determination regarding the operable unit where the soils are to be consolidated will address the final disposition of the contaminated soils, but EPA has not provided the Tribe with a written commitment to that effect and has likewise provided no indication of when such a determination will be made. Moving contaminated soils from OU-7 to OU-1 or OU-2 and not requiring the responsible party to commit to further action by delaying the decision to permanently remove these soils from the Leech Lake Reservation in a future ROD is a non-decision, which puts all of the risk on the Tribe and is inconsistent with any definition of "temporary storage" that the Tribe could support.*

Response

EPA understands this to be LLBO's position, and notes LLBO's lack of support for Alternative S15-B in Section 8.1.8 of the Proposed Plan and in Part I and Part II, Section 11.9 of the ROD. Contrary to the statement that EPA has not indicated when the final disposition of the soil in the onsite consolidation area will be determined, EPA specifically addressed this in EPA's May 24, 2016 letter from Superfund Division Director Richard C. Karl to LLBO Chairwoman Carri Jones, and again in EPA's letter from SEMD Director Douglas Ballotti to LLBO Chairman Faron Jackson, Sr., dated May 20, 2019. See also the response to Comment 61.

Comment 23: *Several commenters stated that they oppose any storage of contaminated soils within Cass Lake, the boundaries of the St. Regis Superfund Site or within the boundaries of the Leech Lake Reservation.*

Response

EPA considered both on-site consolidation and off-site storage. As described in Sections 8.1 and 8.2 of the Proposed Plan and Sections 11 and 14 of the ROD, EPA found that S15-B will effectively prevent exposure to soil contamination, is more effective with respect to short-term impacts to workers and the community, and is also lower cost, than S15-A. Therefore, EPA found that S15-B better fulfills EPA's remedy selection criteria.

4 Comments about Defining OU7 and its Relationship to Other OUs

Comment 24: *Several commenters stated that EPA should select a remedy for all OUs, not just OU7.*

Response

In deciding to address OU7 first, EPA is exercising its discretion in managing the site in OUs in accordance with 300.430(a)(1)(ii)(A). EPA appreciates the desire to address soil in other OUs and to that end is overseeing a Feasibility Study to evaluate alternatives to address them.

Comment 25: *The PRAP addresses only OU-7, while the 2011 plan was Site-wide. A record of decision addressing the whole Site is preferable for three reasons: (1) remedies for various operable units should be integrated; (2) parties singled out by EPA to perform any remedy can better negotiate with the agency to perform any work if the totality of the work is known in the first instance; and (3) very simply, it is time to wrap up this Site.*

Response

At the request of the PRPs, EPA agreed to defer remedy selection for OU3 and limit this Supplemental FS Report to OU1, OU2 and OU7. In deciding to address OU7 first, EPA is exercising its discretion in managing the site in OUs in accordance with 300.430(a)(1)(ii)(A).

Comment 26: *International Paper remains concerned that the EPA is only selecting a remedial action plan for OU7 and is deferring selection of a plan for OU1 and OU2 to a later date. One of the Site-specific remedial action objectives mandated by EPA in the 2011 FS process and in the 2015 SFS process was to: "Prevent the potential for the future transfer of Site-related COCs in OU1 (and in OU2) surface soil to prevent an unacceptable potential risk to human health through runoff and/or windblown dust to nearby residential property and roads." The selection of a remedy only for OU7 does not meet this Site-specific objective. The EPA's statement in the June 2019 Proposed Plan for OU7 that: "collection of soil samples from [] OU7 ... [will be used] to confirm that no recontamination from the adjacent OUs is occurring" acknowledges the potential and is arbitrary and speculative regarding the interplay between the various OUs. Moreover, International Paper is concerned that no amount of sampling necessary to satisfy potential stakeholders and/or EPA is not well defined and that International Paper could be ordered to conduct unnecessary and expensive sampling in OU7, for years in the future. International Paper objects to the creation of this risk, and wants to be clear that if the remedial action moves forward only as to OU7, International Paper cannot be held responsible for any post remedy determination that additional sampling or actions are necessary. Moreover, there does not appear to be any technical or practical basis for the deferral of a decision on a remedial decision for OU1 and OU2. There is no data gathering or information development contemplated that would better inform a decision. Absent a technical reason for delay, International Paper objects to separating the remedial decisions. Moreover, absent a timeline for a decision, it could be years*

before a remedial action plan is selected for the soils in OU1 and OU2. Any eventual remediation of OU1 and OU2 will cause additional disruption to Cass Lake residents due to construction traffic, dust, and noise that could have been minimized with a more coordinated and contemporaneous effort.

As EPA is pursuing a remedy for only OU7, at a minimum International Paper would be interested in discussing with EPA the possibility of including addressing the most heavily traveled roads as part of the OU7 remedial action, in part as a response to comments and any potential concerns that remediated OU7 properties could be re-contaminated by wind-blown dust. The interim dust suppression efforts have been on-going for the roads for more than 12 years and this is maybe an opportunity to achieve some finality with respect to this aspect of the remedial action.

Response

EPA is exercising its discretion in managing the site in OUs in accordance with 300.430(a)(1)(ii)(A). Due to the previous removal actions which addressed the most contaminated surface soil at the site, EPA believes that the primary risk of dust deposition in OU7 comes from the gravel roads. EPA will consider addressing the gravel roads concurrently with the OU7 properties; however, this may require that EPA issue a remedy modification with the appropriate basis for the modification documented in the administrative record. Alternatively, the risk of dust deposition from the gravel roads to the OU7 properties may be managed with ongoing dust suppression on the roads while proceeding with a timely remedy selection for OU1 and OU2. In addition, testing to ensure that remediated properties remain below cleanup levels may be used.

Comment 27: *The selection of Alternative 15B for OU7 also creates a significant issue in terms of potential stakeholder expectations for the rest of the Site. While 15B is not appropriate for OU7, OU1 or OU2, any Alternative 15-type remedy is simply not implementable for OU1 and OU2.*

Response

EPA believes that stakeholders should expect EPA to select remedies according to the requirements, priorities and expectations outlined in CERCLA, the NCP, and EPA policy and guidance. While EPA seeks to be transparent and responsive in its decision-making role, EPA does not select remedies for the express purpose of creating or managing stakeholder expectations. Future remedies for OU1 and OU2 will be selected by comparing the alternatives for those OUs with respect to the nine criteria, which includes implementability. As part of the transparent and responsive process of soliciting input from the public and stakeholders outlined in the NCP, EPA will present its comparison of alternatives in a Proposed Plan, which will include a discussion of implementability and solicit stakeholder and public comments. EPA will then develop and issue an appropriate ROD that considers all input received.

Comment 28: *All Alternatives (except Alternative 10) should be modified to address significant assumptions imposed by EPA during the Supplemental FS process that were not*

necessary, reasonable or appropriate, such as the assignment of properties to OU1 and OU7. There are only 5 properties in OU7 that have been identified as residential, that are not owned by International Paper and could be considered for a residential clean up standard. International Paper is prepared to implement an HHERA or EPA approved cleanup level on these properties, or work with the property owners to purchase the properties.

The remainder of the area is vacant or consists of non-residential properties owned by International Paper, LLBO DRM (Fish Hatchery and Headquarters properties which are not residential), Cass Forest Products (which is an industrial facility), Cass County Highway Department (which is an industrial facility), or the City of Cass Lake (vacant property given to the City by International Paper's predecessor for industrial/commercial use). Properties now owned by the City and Cass Forest Products that were once part of the wood treating facility were directed by the EPA to be included in OU7 and treated as residential based on existing zoning. Local zoning is not conclusive as to future use and should not be the only factor considered for purposes of this evaluation.

There is significant additional information that was available to EPA to properly identify these properties as areas that should be treated as industrial or commercial property. For example, a number of these properties were previously transferred by Champion to the City at the City's request with the understanding they would be used only for industrial/commercial purposes. Some of the area is owned by Cass Forest Products, an industrial company. The City of Cass Lake Comprehensive Plan adopted August 8, 2014 shows these properties (in fact all properties south of the railroad and north of 3rd Street) to have industrial/commercial use in the future. The City and Cass Forest Products owned properties should be moved to OU1 and treated as industrial/commercial property for purposes of remediation.

Response

EPA places a high priority on restoring contaminated lands to their reasonably anticipated future use.⁴⁰ EPA spent significant time discussing the classification of land parcels as residential or commercial/industrial with the PRPs and EPA's support agency partners, and between 2011 and 2019, EPA reclassified several properties on the basis of new information not available in 2011 (such as occupancy status).

EPA notes that the city has not changed its official zoning map to conform with the 2014 Comprehensive Plan cited in the comment. While local zoning ordinances are not necessarily determinative or conclusive, EPA believes it is reasonable to remediate property zoned residential by a local municipality to be suitable for residential use, even if it currently is owned by a business entity. This is particularly true when properties zoned residential have historically

⁴⁰ See *Superfund Redevelopment: Planning for the Future, Protecting Public Health and the Environment*, Office of Superfund Remediation and Technology Innovation, Superfund Redevelopment Initiative, April 2018: <https://www.epa.gov/superfund-redevelopment-initiative>

actually been in residential use and have only recently purchased by a business entity, but also true for the property deeded by IP to the City of Cass Lake, regardless of an undocumented “understanding” about its future use at the time of transfer.

See also the responses to Comment 29, Comment 30 and Comment 31.

Comment 29: *It is International Paper's understanding that properties that are shown in OU7 in the June 2019 Proposed Plan can be moved to OU1 in Remedial Design/Remedial Action if they are not in residential use and there is a demonstration that they will not be useable as such in the future (i.e. zoning changes or deed restrictions). Deed restrictions should be preferred over zoning since they are more permanent.*

Response

If EPA determines that a property’s status as a current or potential future residence changes during the time from the ROD to implementation of this remedy, EPA has the ability, using a remedy modification if necessary, to include or exclude additional properties from OU7. However, EPA does not expect to reclassify properties zoned residential or foresee that a significant number of parcels will be reclassified.

Comment 30: *International Paper objects to the Proposed Plan's consideration of properties that are owned by International Paper as "residential" for the purposes of the OU7 proposed remedial action. International Paper owns approximately 60% of the land area in OU7. International Paper has removed any houses on the properties it owns, does not intend to allow residential development of these properties and is in the process of recording deed restrictions on its properties that will preclude residential use now and into the future. International Paper is placing land use restrictions on its properties that will preclude residential use now and into the future. At a minimum, the vast majority of the land in OU7 will never be in residential use. The International Paper-owned properties should also be moved to OU1 and treated as industrial/commercial property for purposes of remediation.*

Response

EPA believes it is neither the purpose nor the most beneficial application of the CERCLA process for a business entity to purchase properties that a local community or municipality intends to be residential for the purpose of defying local zoning ordinances, maintaining them as non-residential, and obtaining a less expensive remedy. See also the response to Comment 28.

Comment 31: *International Paper objects to EPA's directive that the DRM property be assumed to be residential property and included in OU7 absent residential zoning or residential land use. The DRM properties should also be moved to OU1 and treated as industrial/commercial property for purposes of remediation.*

Response

EPA believes it is reasonable, given the limited land base within the Leech Lake Reservation and the need for housing for LLBO members, to anticipate that LLBO-owned property currently in commercial use might be used for residences in the future. See also the response to Comment 28.

Comment 32: *Several parties commented that once this remedy is implemented, the potential for recontamination from contaminated surface soil on OU1 properties must be addressed. Some parties asked for clarification about how recontamination would be prevented, or requested ongoing sampling until the completion of soil remedial actions at other OUs. One party asked if the potential for re-deposition be mitigated by covering OU1 and 2 with a cover to prevent or minimize this (clean soil or some other cover) until OU1 and OU2 can be remediated.*

Response

Timely remedy selection for adjacent industrial/commercial areas, along with actions to prevent recontamination (e.g. applying dust suppressant to gravel roads), and actions to identify any recontamination (e.g. resampling of properties), will be important factors in preventing and/or identifying recontamination. At this time, EPA believes the potential for recontamination such that residential soil exceeds the cleanup level of 10 ppt dioxin is very low. EPA has successfully used phased remediation of soil in residential areas at other sites. In addition, the potential for runoff and dust deposition from OU1 and OU2 to OU7 will not increase from what it is currently; therefore, if residential properties have not been recontaminated in the last 14 years (the approximate timeframe of the interim remedial action), EPA's expectation is that they will not be contaminated within a few more years. The amount of resampling required, type of monitoring, and/or ongoing mitigation actions to control dust will be commensurate with EPA's understanding of the potential risk.

Comment 33: *The Tribe recognizes that its comments at this time are directed to specifically address the Proposed OU-7 ROD. Nevertheless, the Tribe encourages EPA to establish an appropriate timeline for development and issuance of remedial plans for the other operable units at the Site. The sixth five-year review of the Site will soon be underway but despite more than thirty years of work the Site contaminants have not yet been contained. The Tribe appreciates EPA's goal of addressing OU-7 as the operable unit posing the most direct threat to human health, but the work to address OU-7 does not displace EPA's responsibility to the remainder of the Site.*

Response

Although there are many factors influencing estimated timelines of site work, EPA anticipates proceeding with the remedy selection process for these other OU areas during the OU7 remedial design phase.

5 Comments about Site Contamination and Risks to Human Health

Comment 34: *DNR recommends clarification and a holistic description of all soil contaminants found within the proximity of the site. This clarification should include how and why the location of soil remediation was chosen specifically for the residential locations and dioxin, but excludes properties to the west of the site and on poly aromatic hydrocarbons and pentachlorophenol.*

Response

The nature and distribution of soil contaminants is described in the site specific HHERA, found in the site administrative record⁴¹. Appendix B of the Supplemental FS Report describes the development of PRGs for both dioxin and B(a)PE, and describes why PCP is not included. The comment is incorrect that PAHs are excluded. With respect to the area defined within OU7, EPA is exercising its discretion in managing the site in OUs in accordance with 300.430(a)(1)(ii)(A). Defining the residential OU7 and industrial/commercial OU1 within the contiguous area south of the BNSF railroad tracks and east of Highway 371 is appropriate given the historical contaminant release and transport mechanisms and site sampling.

Comment 35: *When the facility was operating, the wind would spread odors and pollutants from the facility to the rest of Cass Lake, including the schools, and dust came indoors through open windows. It is unclear whether EPA has considered the impacts beyond the on-site workers and residents.*

Response

EPA does have soil data in areas of Cass Lake north of the railroad tracks and south of Highway 2. These data are discussed in the HHERA and show that all properties sampled north of the railroad tracks are within EPA's acceptable risk range. The house dust samples collected in 2004 showed that dioxin in homes adjacent to the site exceeded screening values in five of the ten homes sampled. The results of this house dust sampling also demonstrated a correlation between soil dioxin values and in-house dust values. Because the soil north of the railroad tracks is within EPA's acceptable risk range, and because soil removal and remedial actions have stopped further deposition of airborne dust to off-site areas, the indoor dust values in off-site buildings in Cass Lake are expected to have acceptable dioxin concentrations.

Comment 36: *Several commenters indicated that they and/or loved ones had illness that could be due to site contamination, that children and others in the community had diseases at high rates, and that the health impacts from exposure were ongoing. Two commenters noted that either they or a family member suddenly contracted*

⁴¹ See <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.ars&id=0503781&doc=Y&colid=3667®ion=05&type=AR>; or navigate to www.epa.gov/superfund/st-regis-paper; click on "Site Documents & Data", and then "Administrative Records".

an unknown disease in which they lost their voice, and in one case had difficulty breathing, from site contamination.

Response

The 2003 Health Consultation, prepared by the Agency for Toxic Substances and Disease Registry (ATSDR), did not find that a conclusive connection between illness and site-related contamination. This document concluded that “Many residents have lived in the area for many years, and several worked at the site when it was in operation. Given waste disposal practices of the facility, burning of waste materials in the Tee-Pee burners, fugitive air emissions from the operations, unrestricted access of children to the disposal ponds, and close proximity of homes to the facility, historical exposures could have been significant.” It is important to note that although ATSDR did state that “historical exposures could have been significant”, exposure to contaminants does not necessarily result in the development of disease.

The assessment of risk associated with exposure to environmental contaminants is based on an estimation of potential hazards for a population of individuals who may be exposed. It is a tool to assist in making health-protective decisions, and is based on the potential health effects at the lowest level of exposure. That estimation of population risk cannot be used to confirm or refute specific health impacts for individuals who may live or work in areas of contamination. In addition, since most chronic diseases have multiple risk factors, attributing a person’s symptoms or disease to a specific environmental exposure is generally very limited.

For reportable diseases, such as cancer, health agencies can use state registries to determine if a population has a higher occurrence of cancer compared what might be expected for a similar community or throughout the entire state. However, even if the occurrence of a disease is higher than expected, it would still not be possible to make a causative link between environmental exposure and disease.

With regards to the specific concern about the loss of voice, EPA and ATSDR have no information indicating that exposure to the site contaminants are associated with this symptom. The general recommendation to persons experiencing the symptoms of disease is to consult with their doctor to determine possible causes and effective treatment. This information will be forwarded to local health officials for make them aware of these concerns.

Comment 37: *One commenter noted that it is unsafe to drink the water, and residents have to buy bottled water.*

Response

The remedy for OU7 soil is not expected to have any negative impact on groundwater quality. The commenter did not state whether the concern was related to a private water well or municipal water. As described in the 2011 HHERA and in the 2003 Residential Well Evaluation – Supplemental Assessment, no residential wells are within a contaminated groundwater plume, and risk assessment sampling indicated that all concentrations in those residential wells that had not closed met drinking water standards. Sample results showed that the groundwater quality in residential wells would be protective of human health if used as either drinking water or irrigation water.

Comment 38: *The remedy decision needs to consider the future of the children, who can't play or fish in the area.*

Response

The expected outcome of the selected remedy is that the cancer and non-cancer risks from exposure to soil in OU7 will be reduced for all residents, including children. The properties in OU7 will be protective of residential or any other use.

6 Comments about Environmental Justice and Federal Trust Responsibility

Comment 39: *This is a reservation in a high poverty area, not a rich white area or a metro area where those things do get cleaned up, and they do get to have beautiful parks and put into places and have all kinds of housing developments established.*

Response

EPA endeavors to clean up all Superfund sites consistent with CERCLA, the NCP, and applicable federal and EPA policy and guidance. In 2004, the City of Cass Lake and the LLBO received assistance from EPA's Superfund Redevelopment Initiative and EPA Region 5 to undertake a community-based planning process to develop future land use recommendations at the St. Regis site. Because the selected remedy will restore OU7 to unrestricted use, that area will be suitable for parks, housing and other uses.

Comment 40: *The Tribe objects to the Proposed OU-7 ROD to the extent that it will result in the movement and placement of contaminated soils exceeding HSCA standards from the OU-7 area to another location within the Leech Lake Indian Reservation. The Tribe objects to any remedial action that results in the permanent placement of contaminated soils exceeding the standards set forth in the LLBO Hazardous Substance Control Act (HSCA) within the Reservation environment. The Reservation Environment is defined as all lands and waters within the exterior boundaries of the Leech Lake Indian Reservation.*

The federal government's trust responsibility to the LLBO arises from the Treaty of 1855 and obligates EPA and other federal agencies to ensure that the homelands of indigenous people reserved in executive treaties are protected from unnecessary encroachment. Site-related contamination of Reservation soil and water is a dangerous and unnecessary encroachment into the homelands of the Tribe and the Tribe believes that the removal of contamination exceeding HSCA standards from the Reservation is the only way to adequately protect the Tribal Homeland.

Shifting the contaminated soil burden from the PRP to the Tribe without a meaningful definition of "heavy contamination" or "temporary storage" that the Tribe is able to use to make a fully informed decision regarding their disposition of the proposed OU-7 remedy is also inconsistent with the 1984 Indian Policy and Executive Order 12898. The considerations at this Site are different than other sites due to its location being entirely within an Indian Reservation, which has been designation by EPA as an Environmental Justice site ("EJ Site"). The EJ Site

designation amplifies EPA's obligation to act and consider criteria factors in a manner consistent with its federal trust obligation and in consideration of the long term impacts this decision will have on a community that continues to experience disproportionate exposure to environmental hazards and suffers from increased vulnerability to such hazards.

Without assurances that contaminated soils will be removed in the future, the Proposed OU-7 ROD will likely result in the permanent storage of contaminated soils in OU-1 or OU-2 and thus shift the burden of contamination to the Tribe. Thus perpetuating further socioeconomic and environmental injustices onto a Tribal and non-Tribal EJ Site community that has been historically plagued with these problems.

Through verbal and written testimony, the Tribe has consistently voiced its concern that permanent storage of contaminated soils within the exterior boundaries of the Leech Lake Reservation limits the Tribe's ability to place parcels of fee land into federal trust status, and thus would disproportionately affect our community. The Leech Lake Reservation is the permanent home of the Leech Lake Band of Ojibwe. Recovering our lands is a Tribal priority that must be considered by EPA, regardless of current land ownership. These concerns were loudly expressed at the community meeting hosted by EPA on July 16, 2019, and the previous community meeting hosted by EPA in 2014 regarding a previous proposed OU-7 ROD. The Proposed OU-7 ROD is not consistent with EPA guidance, EPA's federal trust obligation, and does not adequately address the site considerations or appropriately consider the ongoing socioeconomic consequences to the EJ Site community.

Response

As stated in EPA's July 31, 2017 consultation close-out letter from Superfund Acting Division Director Margaret Guerriero to LLBO Chairman Faron Jackson, Sr., and again in EPA's May 20, 2019 letter from SEMD Director Douglas Ballotti to LLBO Chairman Faron Jackson, Sr.:

EPA recognizes the importance of respecting tribal treaty rights and its obligations to do so. Recognizing the role of treaties is part of EPA's federal trust responsibility. EPA carries out the federal trust responsibility with respect to the St. Regis site by implementing the Superfund program in accordance with CERCLA, the National Contingency Plan, other applicable statutes and regulations, and EPA policy and guidance.

EPA notes that consideration of treaty rights in Agency decision making does not create any new legal obligations for EPA or expand the authorities granted by EPA's underlying statutes, nor does it alter or diminish any existing EPA treaty responsibilities.

EPA has engaged in consultation and collaboration with LLBO representatives since EPA has taken the lead for this site. The May 2011 *EPA Policy on Consultation and Coordination with Indian Tribes* establishes clear EPA policy standards and goals for the consultation process. It provides EPA policy and approaches to when and how consultation takes place, designates EPA

consultation contacts to promote consistency and coordination of the process, and establishes management oversight and reporting to ensure accountability and transparency.

In 2016, EPA developed the *EPA Policy on Consultation and Coordination with Indian Tribes: Guidance for Discussing Tribal Treaty Rights* after nationwide tribal consultation. This Guidance complements the *EPA Policy on Consultation and Coordination with Indian Tribes* by providing affirmative steps for the Agency to take during tribal consultations when an EPA action occurs in a specific geographic location and a resource-based treaty right, or an environmental condition necessary to support the resource, may be affected by EPA's action.

Regarding the remedy for OU7, EPA engaged in formal consultation with LLBO in 2011, in 2015, in March 2019, and again in October 2019, pursuant to the 1984 EPA Indian Policy and EPA's 2016 Policy on Consultation and Coordination with Indian Tribes.

As a result of the 2015 consultation, EPA modified its initial plan for Remedial Action at the site to support the Tribe's desire to make the best use of scarce residential resources within the reservation by first focusing on remediating residential properties. Additionally, at all times in EPA's lead for the remediation of the site, EPA has consulted and coordinated with LLBO as a Support Agency Partner, as designated in the National Contingency Plan at 40 CFR Part 300.515 et al.

With respect to current exposure to site contaminants, through the interim remedial action that EPA ordered in 2005 and has overseen since that time, as well as the three earlier removal actions, current exposure to contaminated soil and indoor dust has been significantly reduced to concentrations below levels of concern. The selected remedy removes dioxin soil contamination from residential properties to a level that is close to background; as such, it will achieve further reduction in the environmental burden of residents of the site.

EPA notes that factors independent of the soil consolidation area, such as private ownership of the parcels on which the BNSF rail line and the RCRA Subtitle C containment unit are located, currently limit placing those parcels in trust. The onsite soil consolidation is planned for an area where future development or a change in property ownership is not realistic, given facts available to EPA, within the foreseeable future, and includes either railway frontage or vacant PRP-owned property adjacent to the current Subtitle C RCRA containment unit. In addition, because vacant property with redevelopment potential in OU1 will not be used for the consolidation area, EPA anticipates that the remedy will not prevent any opportunities for future commercial development.

EPA takes its role as an Agency committed to proper stewardship in dealing with Environmental Justice issues quite seriously. EPA is tasked by Congress with protecting human health and the environment. EPA also must follow the fundamental federal EJ policy (Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (59 FR 7629, Feb. 16, 1994)). To implement the EO, EPA further considers the Region 5 policy and legal tools that require its Superfund Program to consider many factors, and operate its public outreach and community involvement in a manner that assures transparency and engagement with as much of any affected community as possible, especially an affected EJ

community. EPA took such measures in this case, as demonstrated by numerous public meetings throughout the feasibility study process and site information newsletters distributed by mail.

With respect to EPA having already provided a definition of “temporary”, see EPA’s May 24, 2016 letter from Superfund Division Director Richard C. Karl to LLBO Chairwoman Carri Jones, and again in EPA’s letter from SEMD Director Douglas Ballotti to LLBO Chairman Faron Jackson, Sr., dated May 20, 2019.

Comment 41: *The people of Cass Lake and Pike Bay deserve justice, clean water and clean soil.*

Response

The selected remedy removes dioxin soil contamination from residential properties to a level that is close to background; as such, it will reduce the environmental burden of residents of the site. Groundwater is being addressed through a separate remedy.

7 Comments about Future Use of the Site and Residential Use of OU7

Comment 42: *Construction of the remedy under Alternative 15B is anticipated to take at least 3 years, which will unnecessarily delay any planned industrial/commercial redevelopment of OU7.*

Response

The City of Cass Lake’s residential zoning designation in OU7 prohibits industrial/commercial redevelopment on those properties within the city. Rezoning is available to the city if so needed to accommodate industrial/commercial redevelopment in this area; if this were to occur, properties may move between OU7 and OU1 as described in the response to Comment 29. The LLBO DRM property is already developed, and EPA is not aware of any planned redevelopment.

Comment 43: *The Tribe's concerns regarding future productive land use are highlighted by International Paper's ("IP") August 19, 2019 (sic) comments on the Proposed OU-7 ROD, which note that IP owns and will place deed restrictions on 41 properties in OU-7 to prevent future residential use of the OU-7 area. IP makes a point of requesting that EPA recognize that "the vast majority of the land in OU7 will never be in residential use", and asks for "flexibility to recognize the potential for properties currently in OU7 to be moved into OU1 based on zoning, actual land use or deed restrictions." (emphasis added). IP's argument for permanent removal and severance of the Leech Lake Reservation land from residential use would preclude the Tribe and the City of Cass Lake from utilizing a significant portion of the Reservation's population center.*

Response

EPA expects by this action to return all OU7 properties to beneficial use, which is expected to be residential. In so doing, OU7 properties will be suitable for all uses.

8 Comments about the Implementation of the Remedy

Comment 44: *MPCA requests the opportunity to provide input on remedial action design soil sampling locations to address any data gaps prior to remedial action implementation. It is our understanding that remedial action design sampling will be conducted on all properties in OU7 that have not been fully characterized yet. Sampling plans for each individual property will need to be tailored to account for any previous wood treating operations or other activities that may have occurred on or near the property that may have affected depth and distribution of contaminated soil. In addition to the contaminants of concern identified in the Proposed Plan, the MPCA expects that soil will be characterized for other potential site contaminants, including PCP, where appropriate for the design and confirmation sampling.*

Response

EPA anticipates engaging both of its support agency partners, LLBO and MPCA, in oversight of remedial design. EPA also expects that unsampled OU7 properties will be sampled to determine the need for excavation on that property.

Comment 45: *The plan for soil removal and remediation should incorporate proper stormwater management and erosion control best management practices. The plan for soil removal and remediation should also detail how residential out-structures, gardens, trees, and other items in areas of contamination will be replaced. Urban landscaping and vegetation is important for wildlife and water quality.*

DNR recommends providing further details regarding the potential exposure of a larger area outside of the listed units to contaminated dust from the proposed activities. Please detail how dust will be controlled during and after construction, including the proposed water source used for dust control. Specific businesses and locations may be more vulnerable to on-site dust build-up from related activities located outside of the project area.

Response

Specific design criteria will be developed during remedial design. The best management practices and measures to address the concerns noted are routinely included in soil excavation project design.

Comment 46: *The Natural Heritage Inventory DNR has one observation of a rusty patched bumble bee at the project site. This species is a federally protected species. Please consult with the US Fish and Wildlife Service for further guidance and consideration.*

Response

Attachment A to the ROD lists the Endangered Species Act of 1973 as potentially applicable to the site, and Minn. Rules Ch. 6134 as a TBC. It is EPA's practice to request concurrence with the USFWS on determinations of impacts to federal endangered species.

Comment 47: *DNR requires a water appropriation permit for all use of water over 10,000 gallons/day or 1 million gallons per year. Please contact Area Hydrologist Darrin Hoverson at 218-732-8960 ex 225 or visit our online permitting website at www.mndnr.gov/MPARS.*

Response

EPA does not anticipate that Minnesota water appropriations rules would be ARARs for a soil excavation remedy such as Alternative S15-B, such that the remedy would need to comply with the substantive requirements of those rules. The NCP specifically states at 40 CFR Section 300.400(e) that, “[N]o federal, state, or local permits are required for on-site response actions conducted pursuant to CERCLA sections 104, 106, 120, 121, or 122.” Additionally, EPA has no basis on which to determine that State of Minnesota rules would be enforceable within the LLBO reservation.

Comment 48: *On-site trucking and traffic control will be important along the Hwy 371 corridor for DNR staff safety. Please further describe the number and frequency of trucks using the 371 as well as Hwy 2 corridor during this construction project.*

Response

The number of trucks trips is found in Table 6 of the Proposed Plan and Table 14 of the ROD. More precise information will be available when the remedial design is developed.

9 Other Comments

Comment 49: *Many residents did not receive the fact sheet announcing the proposed plan and public meeting.*

Response

EPA notified the public of the proposed plan and public meeting in the following ways: 1) fact sheets were mailed to the Cass Lake post office for distribution in post office boxes; 2) fact sheets were mailed to persons who have provided a mailing address to EPA in the past; 3) EPA published public notices in the Bemidji *Pioneer*, the Cass Lake *Times*, and *DiBahJiMon*; 4) EPA posted the proposed plan, fact sheet and public notice on the site website, and 5) EPA emailed the proposed plan to LLBO DRM, MPCA and the PRPs. EPA welcomes additional suggestions about how to communicate with the public.

Comment 50: *The community was not informed in the 1980s when the St. Regis site was listed on the National Priorities List.*

Response

On September 21, 1984, after public notice and comment, EPA published the final listing of the site in the Federal Register, at 49 Fed. Reg. 37070.

Comment 51: *EPA's proposal has too many "if this," "then that," for the community to make informed comments.*

Response

Although EPA endeavors to limit uncertainty in the Superfund process, some will always remain. In accordance with 40 CFR Section 300.430(a)(2), the purpose of a feasibility study is to evaluate alternatives to the extent necessary to select a remedy. The Supplemental FS Report describes the assumptions made in the FS in order to develop the alternatives. If any of those assumptions prove to be inaccurate to the degree that a fundamental change to the remedy is warranted and EPA must amend this ROD, the NCP at 40 CFR Section 300.435(c)(2) requires EPA to notify the public of the proposed change and consider all public comments received.

Comment 52: *We had all our white fish and our fish in our freezers when the EPA first came here and told us not to eat that fish because of the contamination. And the health department told us the same thing. They said, "Don't go netting for the white fish in Pike Bay." And that's the way we earned our money, and that's the way we fed ourselves. And that white fish is a fish that goes closest to the bottom of the lake.*

Response

EPA performed and oversaw fish tissue sampling between 2001 and 2004. The samples showed that the incremental dioxin/furan concentrations in Cass Lake/Pike Bay fish are either indistinguishable from background fish, or are associated with the high end of EPA's acceptable risk range. This conclusion assumes that adults consume 224 grams of fish (or of whitefish, cooked weight) per day for a 70-year lifespan, in order to be protective of tribal members who may eat a greater amount of fish due to subsistence and/or cultural reasons.

Comment 53: *OU1 should not be detrimental to the community and the growth of the community; even when OU7 is cleaned up, OU1 buffers OU7 and that property value is killing this town and creating negative economic impacts for the people who are still living here and their children.*

Response

EPA is not selecting a remedy in this ROD for OU1, but by this action, EPA expects OU7 to be available for unrestricted use. EPA appreciates the desire to address soil in other OUs and to that end has overseen development of a Feasibility Study to evaluate alternatives to address them.

Comment 54: *Remediation of the site has taken too long, and the contamination should be cleaned up.*

Response

The selected remedial action in OU7 will result in permanent removal of contamination from OU7 and is an important step toward site-wide remediation.

Comment 55: *Several commenters stated that the company that released the contamination should clean it up, and has adequate financial resources to do so.*

Response

Consistent with EPA's "enforcement first" policy, EPA will attempt to negotiate with the PRPs an agreement under which the PRPs agree to pay for the cleanup EPA selects in this ROD. The financial health of an entity or entities that are PRPs and may perform the remedy is not one of the criteria EPA considers when selecting a remedy.

Comment 56: *Some commenters were concerned with the fencing present in some areas of the site. One commenter noted that firefighters entered a fenced area of the site to fight a fire, and didn't know they were not supposed to enter. Another commenter noted that the fences on the site are reducing residential property values. Minnesota DNR noted that currently this site has several fences located throughout the project area. Any un-necessary fencing put into place prevents wildlife movement in and around Pike Bay, Fox Creek, and forested lands. DNR recommends working with the responsible party to address fencing removal where it is no longer necessary to protect human health.*

Response

The remedy does not include fencing of any properties in OU7. Fencing may be required around the soil consolidation area, to prevent digging into and disturbing the contaminated soil. EPA notes that in addition to protecting human health, fencing is also used to protect remedy components, such as the groundwater treatment plant. Implementation of a final soil remedy for all OUs at the site will clarify where fencing will continue to be needed, if anywhere. However, EPA does not have authority to direct private property owners to remove fences or allow wildlife to access their property.

With respect to exposure to firefighters from within a fenced area in OU1, EPA recommends that the Fire Department develop a response plan for the fenced areas so that if a response requires them to enter such an area, a standard protocol is in place to provide appropriate protection from exposure. EPA can provide information on the soil contamination in those areas to the Fire Department.

Comment 57: *MPCA is supportive of the proposed remedy because it will meet or exceed risk-based preliminary cleanup goals established for dioxin for residential property for all of OU7, it will achieve the remedial action objective for OU7 by excavating and removing contaminated soil and replacing it with clean soil, and because no ICs would be required on the residential properties post-remediation.*

Response

No response is needed.

Comment 58: *The Proposed Plan contains material errors that require correction. These errors have the potential to introduce an unfair bias against more cost-effective alternatives.*

The estimated cost of Alternative 15B with onsite soil consolidation/borrow is \$20.1 million and not \$18.5 million as presented in Section 7.7 and Table 8 in the Proposed Plan. The additional cost is the cost of preparing and closing the onsite consolidation/borrow area that was assumed to be in OUI. This cost was assigned to OUI in the cost estimate in the 2015 SFS Report. This cost needs to be assigned to OU7 in the June 2019 Proposed Plan given that the plan does not contemplate remediation occurring in OUI.

The estimated cost of Alternative 14B with onsite consolidation/borrow is \$10.7 million and not \$15.4 million as shown in Section 7.6 and Table 8 of the Proposed Plan. Alternative 14 involves the excavation of soil on OU7 properties not owned by International Paper exceeding Level 1 PRGs and placing a 12-inch clean cover on properties owned by International Paper exceeding Level 1 PRGs. The primary reason for the lower cost for Alternate 14 is that more properties are now owned by International Paper than were owned by International Paper when the 2015 SFS that is the basis for the June 2019 Proposed Plan was prepared. The revised cost for Alternative 14B of \$10.7 million includes the cost of preparing and closing the onsite consolidation/borrow area assumed to be in OUI. This cost was assigned to OUI in the cost estimate in the 2015 SFS Report. This cost needs to be assigned to OU7 in the June 2019 Proposed Plan given that the plan does not contemplate remediation occurring in OUI.

Response

EPA agrees that the estimated costs of site consolidation area needs to be added to the estimated costs of the OU7 alternatives. This is the approach taken in a 2016 memorandum *Memo to File re: Costs for OU7 Remedy - Proposed Plan of 3/2016*, in the site administrative record⁴². The information in this memorandum was relied on in the evaluation of cost-effectiveness for the 2019 Proposed Plan. However, EPA acknowledges that the 2016 Proposed Plan mistakenly presented the costs for the “B” alternatives as calculated in the Supplemental FS Report, not the 2016 memorandum. A comparison of the total estimated costs is shown below:

⁴² See <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.ars&id=0503781&doc=Y&colid=3667®ion=05&type=AR>; or navigate to www.epa.gov/superfund/st-regis-paper; click on “Site Documents & Data”, and then “Administrative Records”.

| Alternative | Supplemental FS Report Estimated Costs, \$M | Estimated Costs Recalculated by EPA in 2016 Memorandum, \$M |
|-------------|--|--|
| S11-B | \$8.0 | \$9.3 |
| S12-B | \$10.0 | \$11.4 |
| S13-B | \$10.3 | \$11.8 |
| S14-B | \$15.4 | \$18.0 |
| S15-B | \$18.5 | \$21.4 |

The recalculated costs are 14 percent to 17 percent higher than those presented in the Supplemental FS Report and the 2019 Proposed Plan. This is well within the margin of error of the estimates and does not change any determination of cost-effectiveness of the alternatives.

With respect to the lower costs associated with S14-B due to IP's ownership of a larger number of properties, EPA acknowledges that property ownership and other site conditions can change during the time between the preparation of the Supplemental FS Report, the issuance of a Proposed Plan, and the finalization of a ROD. As a practical matter, EPA must document the basis for a remedy decision with a Feasibility Study that is generally completed months or even years prior to a ROD. When significant changes in the assumptions of the FS occur prior to issuing a Proposed Plan, it is reasonable to incorporate those changes into a revised FS Report or FS addendum. When significant changes occur after a ROD that impact remedy selection, EPA has a remedy modification process to address this, including the use of an Explanation of Significant Differences or a ROD Amendment.

However, in this case, the change in the number of properties assumed to be owned by IP for the purpose of evaluating Alternative S14 is not a significant change. EPA has determined that the future anticipated use of all OU7 properties, including those owned by IP, is residential; and that excavation of contaminated soil to the Level 1 PRG provides the best level of protection for both current and future residential receptors. The number of properties owned by IP does not change these determinations, even if it would reduce the estimated cost of S14-B.

Comment 59: *As discussed in Appendix 8 of the 2015 SFS report, one way of evaluating the relative benefits of different soil cleanup alternatives is to consider the reduction in total contaminant intakes from all sources that each of the cleanup alternatives would achieve. The HHERA evaluated four exposure pathways for residents living near the Site: ingestion of soil and house dust, dermal contact with soil, and inhalation of outdoor particulates. For dioxins, remediation of soil would reduce exposures from all four of these pathways, but it would not reduce typical dietary exposures to dioxin through food. As shown in the figure below (excerpted from Figure 2-2 of the 2015 SFS Report), the majority of dioxin exposures occur through the diet at typical background soil concentrations and at soil concentrations corresponding to dioxin PRGs for the 1×10^{-6} (6.3 ng/kg) and 1×10^{-5} (63 ng/kg) cancer risk levels. Only in the case of the dioxin PRG based on a cancer risk of 1×10^{-4} (630 ng/kg) do soil-related intakes constitute slightly more than 50 percent of total intakes. Stated another way, lowering the PRG from 630 ng/kg to 63 ng/kg would achieve nearly a 50 percent reduction in dioxin exposure and cancer risk from soils and the diet combined. In contrast, lowering*

the PRG from 63 ng/kg to the 10 ng/kg HSCA cleanup level for dioxin would achieve less than a 10 percent further reduction in cumulative risk.

Given the very modest additional potential reduction in total dioxin exposure and risk associated with applying the cleanup level at the Site, in combination with the fact that other remedial alternatives will yield health-protective cleanups with substantially less damaging short-term impacts, fewer implementability challenges, and much lower costs, EPA's preference for Alternative 15B does not reflect an appropriately balanced consideration of the important tradeoffs that exist among the remedial alternatives for soils at the Site.

Response

EPA is selecting a remedy to address unacceptable risks to human health posed by contaminants determined to have been released through the wood-treating operations of the St. Regis Paper Co. facility, regardless of background or other exposures to contamination. The potential human health risks from site-related contamination exceed EPA's acceptable risk range; therefore CERCLA remedial action is justified. The remedial action selected by EPA will significantly reduce potential risks to human health posed by site-related contaminants.

Comment 60: *Table 1 in the Proposed Plan appears to continue to contain dioxin concentrations for samples of soil that was excavated in the 2004 removal action and is no longer on the Site. Also, the data in Table 1 is difficult to reconcile with the data set used in the 2015 SFS. It is recommended that Table 1 be revised to only include samples from OU7 which is the subject of this Proposed Plan and to be consistent with the OU7 data used in the 2015 SFS.*

Response

EPA clarifies the soil dataset used for Table 1 in the Proposed Plan and the ROD in an August 30, 2019 memorandum *Memo to File re: Compilation of Site Soil Data*, in the site administrative record⁴³. This dataset is comprised of soil data provided by IP in 2007 in the context of the HHERA, and in 2012 and 2013 in the context of additional soil investigation. All these data were provided after the removal actions noted in the comment were taken (2003-2005). None of the samples are labeled as no longer being present on the site; one location has a comment "Excavated in 2004 Removal Action - only south half grid; this one is relevant to the north half grid," which appears to indicate that it remains on the site. EPA also notes that the Supplemental FS Report does not clearly present an OU7 soil dataset, as suggested in the comment.

EPA wishes to avoid confusion among site stakeholders and the public about such basic questions as whether data provided even represent media present at the site. Greater efficiency, transparency, and cooperation among site stakeholders can be gained when EPA, PRPs, and others work from and have confidence in the same integrated dataset. To this end, EPA

⁴³ See <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.ars&id=0503781&doc=Y&colid=3667®ion=05&type=AR>; or navigate to www.epa.gov/superfund/st-regis-paper; click on "Site Documents & Data", and then "Administrative Records".

encourages IP to submit all site data, historical and new, in Region 5's electronic data deliverable format, the instructions for which can be found at <https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission>. Managing data electronically will also avoid having to combine datasets from multiple investigations, which can lead to error.

The comment does not say which data were wrongly included in the preparation of Table 1. EPA welcomes the opportunity to review the dataset presented in the August 30, 2019 memorandum for errors. Although it seems unlikely that a revised dataset would suggest that a remedy modification is needed, the process for documenting insignificant, significant, and fundamental changes to a remedy is available consistent with 40 CFR Section 300.435(c)(2).

Comment 61: *The Tribe has previously provided detailed comments to EPA regarding the Draft Proposed OU-7 ROD in letters dated January 9, 2019 and April 2, 2019. the comments set out in the Tribal Comment Letters remain valid and relevant and are by this reference incorporated into and made part of this letter to EPA regarding the Proposed OU-7 ROD.*

Response

EPA provided responses to the January 9, 2019 and April 2, 2019 comments in correspondence from SEMD Director Douglas Ballotti to LLBO Chairman Faron Jackson, Sr., dated May 20, 2019. This document is in the administrative record for the site, and EPA incorporates by reference the responses in that letter.

Comment 62: *EPA should enter into a Cooperative Enforcement Agreement with the Tribe. The Tribe recently provided a letter to EPA expressing its interest in entering into a Superfund Memorandum of Agreement for remedial design to enhance the Tribe's role in participating at the Site as an enforcement agency partner. The Tribe requests that it be permitted to fully participate in Remedial Design and the subsequent Remedial Action process as a cooperative enforcement agency under CERCLA for the purpose of sampling and related processes at the Site, and that it be provided with split samples so it may independently confirm compliance with Tribal cleanup standards and advise its members accordingly.*

Response

As described in correspondence from SEMD Director Douglas Ballotti to LLBO Chairman Faron Jackson, Sr., dated May 20, 2019, there are multiple arrangements by which EPA and a state or tribe can organize and coordinate activities. Please see Title 40 of the Code of Federal Regulations, Part 300 Subpart F; Title 40 of the Code of Federal Regulations, Part 35 Subpart O; the 1999 CERCLA Enforcement Project Management Handbook; the 1984 EPA Indian Policy; and the 2016 Indian Consultation Policy. The role of a support agency partner in Superfund includes the opportunity to be involved in remedial design activities such as review of pre-design investigations, workplans, and design documents, and data reports, and observation of field activities. EPA does not object to LLBO collecting split samples.

Comment 63: *One commenter indicated they believe LLBO is insincere about valuing protection of human health and the environment.*

Response

EPA is committed to working with LLBO in its capacity as a federally recognized tribe and support partner agency in the Superfund process, as defined in 40 CFR Part 300.515 et al.

Comment 64: *The dioxin contamination should be cleaned up expeditiously because Tribal members serve in our military at a higher percentage than most groups in our society, and veterans in Vietnam were exposed to Agent Orange in a country saturated with dioxins and then came home to Cass Lake and living in a community saturated with dioxin.*

Response

EPA endeavors to clean up contamination expeditiously. EPA deferred finalizing its 2011 proposal to clean up soil contamination at the site at the request of several government partners, support agencies, and stakeholders including LLBO, MPCA, MDH and the PRPs. EPA is selecting a remedy to address unacceptable risks to human health posed by contaminants determined to have been released through the wood-treating operations of the St. Regis Paper Co. facility, regardless of other sources of exposure. The remedial action selected by EPA will significantly reduce potential risks to human health posed by site-related contaminants.

Comment 65: *There are people involved outside of these companies that are checking and testing. It's not just being tested by some other company. This was never explained, if the Tribe or anybody else, the local City Councils are involved in this when they're testing this when they say that it's ten parts per million, or if they're reaching the site saying, "Well, this one is 50, but we're only taking the topsoil because that's all we have the money for." So, who is overseeing all this?*

Response

Response actions at the site are currently performed by the PRPs, under oversight by EPA, in consultation with LLBO and MPCA. Sampling and testing plans and procedures are detailed in site-specific Quality Assurance Project Plans, and data results are accompanied by analytic reports detailing data verification and validation procedures. In addition, EPA has either directly collected "split" samples (samples identical to the samples collected by the PRPs) to verify PRP analytic results, or provided funding to LLBO to analyze split samples.

Attachment A

ARARs and Standards To Be Considered

| Requirement | Citation | Prerequisite | Status | Synopsis of Requirement | Comment |
|--|---|---|------------|---|--|
| Federal Action-Specific Requirements | | | | | |
| National Pollutant Discharge Elimination System | 33 USC 1342; 40 CFR 125 | Discharge of pollutants to federally regulated waters | Applicable | Surface water quality requirements for discharges of pollutants to federally-regulated waters. | Surface water management/treatment prior to discharge would be required during construction activities. |
| Motor Vehicle Emission and Fuel Standards, Clean Air Act, Title II, Part A | 42 USC 7521 et seq. | Stationary or mobile source air emissions | Applicable | Regulates air emissions from stationary and mobile sources. | Mobile sources will include excavation and trucking equipment. No stationary sources anticipated. |
| Identification of Hazardous Waste, Resource Conservation and Recovery Act | 42 USC 6901 et seq.; 40 CFR Subpart A 261.1 through 261.3; Subparts C and D | Generation of waste | Applicable | Waste generator shall determine if the waste is hazardous waste. | Testing shall be used to evaluate whether the excavated soil is a hazardous waste. It is anticipated that most of the excavated soil at the site will not be a RCRA hazardous waste. |
| Standards Applicable to Generators of Hazardous Waste | 42 USC 6901 et seq.; 40 CFR 262 Subparts A through D | Generation of hazardous waste | Applicable | Manifest, recordkeeping and reporting requirements for generators of hazardous waste. | Applicable if soil is determined to be hazardous waste. |
| Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities | 42 USC 6901 et seq.; 40 CFR 264 Subparts D, E, F and K | Operations that include the management of hazardous waste | Applicable | Requirements for any operation where hazardous waste would be treated, stored or disposed of. Only the substantive portions would be ARARs. | Requirements must be met if soil that is a hazardous waste is stored onsite before being disposed offsite. |
| Transportation of Hazardous Materials | 49 CFR 171, Subparts A and B | Offering of hazardous materials for transportation | Applicable | Requirements for packaging, labeling, marking, placarding, and motor vehicles used for transportation of hazardous materials. | Applicable if soil is determined to be hazardous material and is transported. |
| U.S. DOT; Hazardous Materials Table, special provisions, communications, emergency response, training and security plans | 49 CFR 172 | Offering of hazardous materials for transportation | Applicable | Each person who offers hazardous material for transportation or each carrier that transports it shall mark each package, container, and vehicle in the manner required. | Applicable if soil is determined to be hazardous material and is transported. |

| Requirement | Citation | Prerequisite | Status | Synopsis of Requirement | Comment |
|--|--|---|------------|--|--|
| U.S. DOT; General Requirements for Shipments and Packagings | 49 CFR 173, Subparts A through F | Shipment of hazardous materials to off-site facilities | Applicable | Definitions of hazardous materials for transportation purposes; requirements for preparing hazardous materials for shipment. | Applicable if soil is determined to be hazardous material and is transported. |
| Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites | OSWER 9355.0-89 EPA-540-R-09-001, December 2012 | Institutional controls considered as part of a remedy | TBC | Provides information on evaluating ICs and developing procedures to coordinate with the entities that implement ICs. | To be considered for implementing the IC(s) on the consolidation area. |
| Implementing Institutional Controls in Indian Country | Office of Site Remediation Enforcement, Office of Enforcement and Compliance Assurance Handbook, November 2013 | Institutional controls considered as part of a remedy in Indian Country. | TBC | Provides information on evaluating ICs and developing procedures to coordinate with the entities that implement ICs in Indian Country. | To be considered for implementing the IC(s) on the consolidation area. |
| Tribal and State Action-Specific Requirements | | | | | |
| Environmental Response and Liability Act | Minnesota Statute 115B.17 Subd 2a | Release of hazardous substance(s) from a Minnesota facility requiring remedial decision | TBC | Requires considering the planned use of property when setting PRGs. | Considered when determining residential properties included in OU7. |
| Hazardous waste facility permit | Minn. Rules pts. 7001.0500 through 7001.0730 | Construction of a hazardous waste management facility in Minnesota. | TBC | Requirements for hazardous waste facility permit. | To be considered if soil that is a hazardous waste is stored onsite before being disposed offsite. |
| NPDES Permits | Minn. Rules pts. 7001.1000 through 7001.1150 | Discharge of a pollutant to waters of the state. | TBC | Requirements for treatment and monitoring of discharges to waters of the state. | To be considered for surface water management during construction activities. |
| Solid Waste Management Facility Permits/ Construction | Minn. Rules pts. 7001.3000 through 7001.3550 | Construction of a solid waste management facility in Minnesota | TBC | Requirements for permitting a solid waste management facility. | To be considered if soil that is a solid waste is stored onsite before being disposed offsite. Only the substantive requirements are to be considered. |

| Requirement | Citation | Prerequisite | Status | Synopsis of Requirement | Comment |
|---|--|---|--------|--|--|
| Onsite waste generation | Minn. Rules pts. 7045.0102 through 7045.0155 | Generation of waste | TBC | Waste generator shall determine if the waste is hazardous waste. | Testing shall be used to evaluate whether the excavated soil is a hazardous waste. It is anticipated that most of the excavated soil at the site would not be a hazardous waste. |
| Generators of Hazardous Waste | Minn. Rules pts. 7045.0205 through 7045.0325 | Management of hazardous waste | TBC | Generation of contaminated soils that are characterized as hazardous wastes. | To be considered if soil is determined to be hazardous waste. |
| Transporters of Hazardous Waste | Minn. Rules pts. 7045.0351 through 7045.0397 | Transportation of hazardous waste to off-site facilities | TBC | Transportation of hazardous waste to off-site facilities | To be considered if soil is determined to be hazardous waste and transported off-site. |
| Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities | Minn. Rules pts. 7045.0450 through 7045.0551 | Operations that include the management of hazardous waste. | TBC | Management of hazardous waste. | To be considered if soil that is a hazardous waste is stored onsite before being disposed offsite. Only the substantive portions would be ARARs. |
| Owners and Operators of Interim Status Hazardous Waste Treatment, Storage and Disposal Facilities | Minn. Rules pts. 7045.0552 through 7045.0649 | Operations that include the management of hazardous waste at interim status facilities. | TBC | Management of hazardous waste at interim status facilities. | Minn. Rules pts 7045.0450 through 7045.0551 may supersede this regulation. |
| Solid Waste | Minn. Rules pts. 7035.0300 through 7035.0805 | Generation of a solid waste | TBC | Requirements and standards for management of solid waste | To be considered in the storage, transport and disposal of contaminated soils generated during remedial activities. |
| Solid Waste Management Facility General Technical Requirements | Minn. Rules pts. 7035.2525 through 7035.2655 | Operations involving management of solid waste | TBC | Requirements for solid waste management facilities | To be considered in the storage, transport and disposal of contaminated soils generated during remedial activities. |
| Water Pollution Control Act | Minnesota Statute 115 | Point source discharges to waters of the state | TBC | Regulates point source discharges to waters of the state. | To be considered for surface water management/treatment prior to discharge during construction activities. |
| Water of the State | Minn. Rules Ch. 7050 | Standards for Surface Waters | TBC | Classifies waters of the state and establishes standards | To be considered for surface water management/treatment prior to discharge during construction activities. |
| Air emissions | Minnesota Statute 116.061 | Abnormal unpermitted air emissions | TBC | Duty to notify and abate excessive or abnormal unpermitted air emissions | To be considered in connection with activities that disturb soil and result in emissions during remedial activities. |

| Requirement | Citation | Prerequisite | Status | Synopsis of Requirement | Comment |
|--|---|---|------------------------|--|---|
| Air emissions | Minn. Rules Chs. 7005, 7007, 7017 | Air emissions | TBC | Air quality rules | To be considered in connection with activities that disturb soil and result in emissions during remedial activities. |
| Noise Pollution Control | Minn. Rules Ch. 7030 | Generation of noise during site activities | TBC | Standards for noise generated during operations. | To be considered; operation of construction equipment would likely exceed noise standards. |
| Property use | MPCA Guidance on Incorporation of Planned Property Use into Site Decisions | Use of institutional controls as part of remedial actions. | TBC | Incorporating property use into cleanup decisions | Considered in setting PRGs based on HHRA and in defining the appropriate use of institutional controls. |
| Location-Specific Federal Requirements | | | | | |
| National Archaeological and Historical Preservation Act of 1974, Within area where action may cause irreparable harm, loss, significant artifacts. | 16 USC 469; Substantive requirements of 36 CFR 65, National Historic Landmarks Program. | Alteration of terrain that threatens significant scientific, prehistoric, historic, or archaeological data. | Potentially Applicable | Construction on previously undisturbed land would require an archaeological survey to the area. | There are no known archaeological or historical sites located within the site boundaries. Measures would be taken to protect historical artifacts, if exposed during excavation activities. |
| Federal National Historic Preservation Act of 1966, Historic project owned or controlled by federal agency. | 16 USC 470; Substantive Requirements of 36 CFR 800, Protection of Historic Properties; 16 USC 470 | Property included or eligible for the National Register of Historic Places. | Potentially Applicable | Action to preserve historic properties; planning of action to minimize harm to properties listed on or eligible for listing or the National Register of Historic Places. | There are no known archaeological or historical sites located within the site boundaries. Measures would be taken to protect historical artifacts, if exposed during excavation activities. |
| Historical Sites, Buildings, and Antiquities Act of 1906, Historic sites | 16 USC 461-467; 16 USC 461-467; 40 CFR 6.3, Requirements for Environmental Information Documents and Third- Party Agreement for EPA Actions Subject to NEPA | Areas designated as historic sites. | Potentially Applicable | Avoid undesirable impacts on landmarks. | There are no known archaeological or historical sites located within the site boundaries. Measures would be taken to protect historical artifacts, if exposed during excavation activities. |

| Requirement | Citation | Prerequisite | Status | Synopsis of Requirement | Comment |
|--|--|--|------------------------|--|--|
| Endangered Species Act of 1973, as Amended, Critical habitat upon which endangered species or threatened species depend. | 16 USC 1531 et seq.; 16 USC 1531; 16 USC 1536(a) 50 CFR 81, Conservation of Endangered and Threatened Species of Fish, Wildlife, and Plant – Cooperation with the States 50 CFR 402, Interagency Cooperation – Endangered Species Action of 1973, as amended | Determination of effect upon endangered or threatened species or its habitat by conducting biological assessments. | Potentially Applicable | Action to conserve endangered species or threatened species, including consultation with the Department of the Interior. | Reasonable mitigation and enhancement measures must be taken, including live propagation, transplantation and habitat acquisition and improvement. However, there are no records of endangered plant or animal species located on OU7. |
| Migratory Bird Treaty Act of 1972, 16 USC 703, Migratory bird area | 16 USC 703 | Presence of migratory birds. | Potentially Applicable | Protects almost all species of native birds in the U.S. from unregulated “take” which can include poisoning at contaminated sites. | Construction activities would be limited to areas where it is unlikely that ground nesting birds would be affected. Survey of ground nesting birds will be completed prior to remediation. |
| Location-Specific Tribal, State and Local Requirements | | | | | |
| Endangered, Threatened, Special Concern Species | Minn. Rules Ch. 6134 | Endangered, threatened or special concern species | TBC | Protection of endangered species (DNR) | To be considered if endangered, threatened or special concern species are found in or near OU7. |
| Chemical-Specific Federal Requirements | | | | | |
| Addressing dioxin in soil at CERCLA and RCRA sites. | OSWER Directive 9200.4- 26, April 13, 1998 | CERCLA/ RCRA site with dioxin contamination | TBC | Recommend preliminary PRGs of starting points for cleanup levels at CERCLA and RCRA sites. | Considered in development of PRGs. |
| Chemical-Specific Tribal and State Requirements | | | | | |
| Hazardous Substances Control Act | LLBO Hazardous Substances Control Act [Adopted by Resolution No. 01-29; August 25, 2000], Section 10 and Appendix B for PCDDs and PCDFs (Dioxin) and B(a)P. | Hazardous substance present in environmental media within the external boundaries of the Leech Lake Reservation | TBC | Limits concentrations of dioxin/furan compounds and carcinogenic PAHs allowed in various media on tribal property. | Considered in development of soil PRGs and final cleanup levels. |

| Requirement | Citation | Prerequisite | Status | Synopsis of Requirement | Comment |
|--|---|---|--------|--|---|
| Evaluating the risk to groundwater at sites from the soil-to-groundwater pathway | Risk-Based Guidance for Evaluating the Soil Leaching Pathway, MPCA Risk-Based Site Evaluation Manual http://www.mn.state.mn.us/cleanup/riskbas edoc.html | Contaminants leaching to groundwater and potential exposure to groundwater. | TBC | Tier 1 and Tier 2 Soil Leaching Values (SLVs) | To be considered during determination of not-to-exceed levels for soil consolidated onsite. |
| Ambient Air Quality Standards | Minn. Rules Ch. 7009 | Activity that affects air quality. | TBC | Establishes acceptable air concentrations. | To be considered in evaluating potential mitigation of air contaminants during excavation. |
| Standards for Stationary Sources, Preventing Particulate Matter from Becoming Airborne | Minn. Rules pt. 7011.0150 | Activity that generates fugitive dust. | TBC | Limits on visible emissions beyond the property boundary. | To be considered in implementing reasonable measures as necessary to prevent particulate matter from becoming airborne. |
| Carcinogenic PAHs in media | MDH guidance Document, July 2, 2004. | Potential PAH exposure to humans | TBC | Estimating health risks from carcinogenic PAHs. | Considered in development of risk-based soil PRGs and site-specific HHRA (Integral, 2007 and 2008). |
| Dioxin-like compounds in media | MDH Guidance Document October 2006. | Potential dioxin-like compound exposure to humans | TBC | Estimating health risks from dioxin-like compounds. | Considered in development of risk-based soil PRGs and site-specific HHRA (Integral, 2007 and 2008). |
| Hazardous substances in media | April 26, 1996 Working Site Screening Evaluation Guidelines. MPCA Risk-Based Site Evaluation Manual http://www.mn.state.mn.us/cleanup/riskbas edoc.html | Potential hazardous substance exposure to humans and ecology | TBC | Guidelines and criteria for screening human health and ecological risks. | Considered in development of risk-based soil PRGs and site-specific HHRA (Integral, 2007 and 2008). |

| Requirement | Citation | Prerequisite | Status | Synopsis of Requirement | Comment |
|---|--|--|--------|---|---|
| Hazardous Waste Determinations for Media Contaminated with Listed Waste | MPCA office memoranda regarding “contained in” policy for listed hazardous waste (MPCA, 1996; MPCA, 2004). | Media potentially contains RCRA Subtitle C listed waste – not dependent on identified release. | TBC | Protocol applicable to hazardous waste management (listed waste contained in policy) in Minnesota; media for disposal at Subtitle D facility must meet 1×10^{-5} cancer risk factor. | To be considered if soil is determined to be hazardous waste. |
| Certification of Environmental Laboratories | Minnesota Statute 144.97 through 144.98 Minn. Rules Ch. 4740 Minn. Rules pts. 4740.2010 through 4740.2040 | Requirement that analyses be conducted by a certified lab. | TBC | Laboratory accreditation requirements for the State of Minnesota (MDH). | To be considered in evaluating laboratories that provide services for this project. |

Attachment B

Tribal and State Response Letters



LEECH LAKE BAND OF OJIBWE DIVISION OF RESOURCE MANAGEMENT

Via Certified and Electronic Mail

October 31, 2019

Leslie Patterson, Remedial Project Manager
U.S. EPA, Region 5
77 West Jackson Blvd.
Mail Code: SR-6J
Chicago, IL 60604-3507

Re: Leech Lake Band of Ojibwe's supplemental comments on EPA's Draft Record of Decision for St. Regis Paper Company Superfund Site Soil Remedy for Operable Unit 7

Dear Ms. Patterson,

At the request of EPA, this letter represents the Leech Lake Band of Ojibwe's ("Tribe") supplemental comments in its capacity as a Support Agency Partner at the St. Regis Paper Company Superfund Site ("Site") on the Leech Lake Indian Reservation ("Reservation"). These comments are specifically directed toward the Draft Record of Decision ("ROD") which sets out EPA's selection of remedial action Alternative S15-B as EPA's preferred alternative for remediation of soil contamination on residential properties in operable unit 7 ("OU7").

The Tribe has previously provided detailed comments to EPA regarding the Draft Proposed OU7 ROD in letters dated January 9, 2019 and April 2, 2019, and further comments regarding the Proposed OU7 ROD in letters dated August 15, 2019 and October 11, 2019 ("Tribal Comment Letters"). Copies of the Tribal Comment Letters are attached hereto as Exhibits A, B, C, and D. As the Draft OU7 ROD demonstrates minor adjustments from the Draft Proposed and Proposed OU7 ROD and in light of the fact that EPA has failed to address the majority of concerns raised by the Tribe in those comments, the comments presented in the Tribal Comment Letters remain valid and relevant and are incorporated by reference and made a part of this letter to EPA regarding the Draft OU7 ROD.

Following are the Tribe's primary objections to the Draft OU7 ROD.

- 1. EPA has failed to recognize the Tribe's Reservation as a treaty guaranteed homeland and has further ignored the Tribe's inherent sovereign authority to enforce the Tribe's Laws by not considering the Tribe's land acquisition policies when determining what properties to include in OU7.**

1 | Page

190 Sail Star Drive NW, Cass Lake, MN 56633

On page two of the Draft ROD EPA states, “[t]he selected remedy in OU7 will address potential exposure to contaminated soil in OU7 by removing that soil from residential properties and burying it below clean cover on PRP-owned property.” The Tribe requests that EPA clarifies whether “residential properties” include all of OU7, specifically the PRP owned properties and roads throughout OU7. It is unclear in the description of the selected remedy whether “residential properties” refer to properties that are currently used for residences, all properties that can potentially be used for residences in the future, all properties currently zoned for residential use, or some combination of these definitions. The discussion of potential future uses of Site properties also fails to consider interests the Tribe has in redeveloping the Site. The Tribe requests that final determination of properties to be included in OU7 as “residential properties” account for the Tribe’s interests in future residential development of the Site.

The Tribe depends on the Reservation land base to provide a homeland for Tribe members. The homeland use of the Reservation is a treaty protected right that has been confirmed and supported by the Tribe’s land reacquisition policies and the resolutions enacting these policies. The Tribe’s land reacquisition policies identify the necessity of land acquisition to support self-determination, economic development, and to expand the reservation land base. These policies acknowledge compliance with the National Environmental Policy Act (NEPA) and other federal hazardous waste and environmental laws is necessary for the Tribe to accomplish land reacquisition through the Bureau of Indian Affairs (BIA) fee-to-trust programs. EPA is obligated to recognize and consider these policies during its decision making activities that limit or impact potential future use of Site properties in accordance with the Tribe’s treaty right to use the Reservation as a homeland.

The EPA Policy for the Administration of Environmental Programs on Indian Reservations (“EPA Reservation Policy”) should guide the EPA to recognize the Tribe as the primary party for setting and making environmental policy decisions on the Reservation. The Tribe’s land reacquisition policies should be considered when determining the potential future residential use of Site properties. This is a bare minimum requirement for recognizing the federal trust responsibility EPA owes to the Tribe. In short, EPA is legally obligated to consider the Tribe’s land reacquisition policies in determining the potential future uses of Site properties.

The discussion of Current and Potential Future Land and Resource Uses in the OU7 ROD does not consider the Tribe’s treaty right to use the Reservation as a homeland because it only considers “the City of Cass Lake’s 2005 zoning map, and existing use” when identifying properties to include in OU7. The discussion of potential future uses of properties at the Site must consider the potential for residential use based on the Tribe’s land reacquisition policies along with post remediation redevelopment plans being developed between the Tribe and City to properly determine the potential for future residential use of properties that are currently included in OU1. The EPA should not rely of a fifteen-year-old zoning map as the primary basis for decisions about potential future land use. The Tribe considers all lands within the Reservation as part of the Reservation land base and over time intends to return all Reservation lands to protected trust land status.

The discussion of future land and resource uses neglects addressing future uses of reservation land and resources by the Tribe for the homeland purpose of the Reservation. The ROD should include

a section discussing The Leech Lake Band of Ojibwe and the Reservation Treaty Homeland, the current emphasis of the Tribe and City to jointly redevelop Cass Lake, and the Tribe's future plans for recovery of Reservation lands to be put into trust. The current assessment is too narrow by focusing entirely on the City's efforts for redevelopment. EPA also mentions that the current designation of properties between OU7 and OU1 is subject to change and some OU7 properties will be re-assigned to OU1. The Tribe opposes any reassignment of properties that would remove properties currently assigned to OU7 and place them in OU1.

Disregarding the Tribe's land reacquisition policies fails to respect the federal trust responsibility owed to the Tribe by EPA. The failure to recognize and respect the Tribe's land reacquisition policies is contrary to the EPA Reservation Policy. EPA must reconsider the distribution of properties between OU1 and OU7 after recognizing the authority of the Tribe to reacquire Reservation land to support self-determination, economic development, and protect the health and welfare of the Tribe. Failing to consider the Tribe's land reacquisition policies to identify properties with potential future residential uses violates the EPA's trust responsibility to the Tribe and EPA's Reservation Policy. In short all lands within the Reservation should be cleaned up to residential use standards.

2. Selection of Level 1 PRG corresponding to lower range of Superfund acceptable cancer risk is supported by the Tribe; however, the Tribe disagrees with EPA's failure to identify the Tribe's HSCA as an ARAR.

The Tribe disagrees with EPA's decision not to clearly identify the Leech Lake Band of Ojibwe Hazardous Substances Control Act (HSCA) and the dioxin Soil Cleanup Level standard as an Applicable or Relevant and Appropriate Requirement (ARAR). The National Contingency Plan (NCP) only contemplates using Excess Lifetime Cancer Risk (ELCR) ranges to establish Preliminary Remediation Goals (PRGs) "when ARARs are not available or are not sufficiently protective." 40 CFR § 300.430(e)(2)(i)(A)(2). The Tribe objects to EPA's failure to identify the HSCA as an ARAR and use the HSCA as justification for the Level 1 PRG. EPA's decision to base the Level 1 PRG on ELCR rather than identifying the HSCA as an ARAR demonstrates EPA is not dedicated to supporting the Tribe's sovereign authority to set environmental standards for the Reservation and sets a bad precedent for the fair application of Tribal law within the Reservation. This decision does not occur in a vacuum and the Tribe is dedicated to applying Tribal HSCA and cleanup standards to all applicable incidents in a fair, consistent manner and it is counterproductive to our shared goal of environmental stewardship to undermine the Tribe in this way.

Using ELCR analysis to determine the Level 1 PRG assumes that there is no otherwise applicable ARAR or that the ARAR is not sufficiently protective. In the May 20, 2019 EPA letter from Douglas Ballotti to Chairman Faron Jackson, Sr., EPA notes that "CERCLA and the National Contingency Plan (NCP) authorize EPA to treat tribal standards as potential ARARs." The HSCA meets the criteria to be considered as an ARAR and as such should be identified as an ARAR. The Tribe interprets EPA's decision not to identify the HSCA dioxin standard as an ARAR as a failure to recognize the inherent sovereign authority the Tribe exercises over civil regulatory matters within the Reservation. The ELCR analysis confirms the HSCA dioxin value as a sufficiently protective ARAR because the HSCA dioxin value is within the 10^{-6} risk level. EPA has not

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190 Sail Star Drive NW, Cass Lake, MN 56633

provided persuasive reasoning for its failure to identify the HSCA as an ARAR, simply stating “it is not necessary to make a final determination on the HSCA standard as a potential ARAR.” (OU7 ROD at 33).

The HSCA dioxin standard should be identified as an ARAR because the Tribe qualifies for treatment substantially similar to a state under 40 CFR § 400.515(b), and the HSCA is generally applicable and legally enforceable within the boundaries of the Reservation, as required by § 300.400(g)(4). The federal government’s Trust responsibility to the Tribe requires EPA to recognize the Tribe’s sovereignty by identifying the HSCA as an ARAR. The Reservation was established as a homeland for the Tribe and the Tribe has the sovereign authority to enforce its laws within the Reservation. Tribal sovereignty includes the exercise of civil regulatory authority over non-Indian fee land when such authority addresses conduct threatening or directly effecting the health or welfare of a tribe. *Montana v. United States*, 450 U.S. 544, 566 (1981).

Due to the documented impact of Site contaminants on tribal members, lands, waters and resources, there is no question that the conduct of the PRPs falls within the Tribe’s civil regulatory jurisdiction. As such, the selection of the remedial action to mitigate the PRPs conduct should be subject to HSCA standards as an ARAR. EPA’s decision not to make an ARAR determination regarding the HSCA is a decision to disregard the sovereign authority of the Tribe to develop, implement, and enforce environmental cleanup standards within the Reservation. As the comments by PRPs on the draft ROD indicate, by failing to define the HSCA as an ARAR EPA has invited the PRPs to voice challenges to Tribal jurisdiction.

The EPA should respect its Trust obligation to the Tribe and identify the HSCA as an ARAR for the OU7 remedial action selected in the ROD, as it is consistent with criteria identified by 40 CFR § 300.400(g). Furthermore, the HSCA dioxin standard is an applicable requirement, the HSCA standard specifically addresses a contaminant found at the Site.

3. Selection of alternative S15-B is inconsistent with the Tribe’s remediation goals because it identifies on-site consolidation of contaminated soil as being protective of human health and the environment.

The OU7 ROD focuses the analysis of on-site consolidation versus off-site disposal of excavated soil for protection of human health and the environment related only to potential exposure to contaminants in OU7. This narrow approach fails to consider the general impact on human health and the environment and the specific impact on the tribal community of consolidating excavated soil within the Site. Consolidating contaminated soil that exceeds HSCA standards anywhere on fee or trust lands within the boundaries of the Site transfers the burden of the contaminants on the Reservation and the tribal community. Moving the contamination within the Site does not address the Tribe’s concerns regarding contaminant concentrations exceeding the HSCA within the Reservation. The Tribe does not approve the selection of any remedy that transfers the burden of contamination on the limited land base by consolidating excavated soil within the Reservation boundaries.

4. EPA's failure to seriously consider rail transport for off-site disposal of excavated soil does not provide a complete picture of viable alternatives and fails to consider the increased short-term effectiveness that rail transport offers.

In section 10.7 of the OU7 ROD, EPA states that “[t]he cost for soil transportation by rail instead of trucks for the ‘A’ Alternatives was considered and was estimated to be more costly than truck transportation.” EPA does not claim that the increased cost of rail transport for off-site disposal of contaminated soil was considered along with other balancing criteria to determine if rail transport is cost-effective. The 2015 Final Supplemental Feasibility Study (“2015 FSFS”) states that EPA directed the PRPs to evaluate transporting contaminated soil by rail to the off-site landfill, but concludes, based on the higher cost and longer time to complete, that rail transport will not be considered as an alternative to transport contaminated soil for off-site disposal.

Dismissing rail transport on the sole basis of cost does not consider the increased short-term effectiveness that rail transport provides by reducing risks of traffic fatalities and reducing the volume of criteria pollutants resulting from the increased truck traffic necessary for off-site soil disposal. Rail transport for off-site soil disposal would significantly decrease the amount of local truck traffic and could confine most local truck traffic within the boundaries of the Site. The EPA should consider a separate alternative for each clean-up scenario that includes balancing of the costs and benefits of rail transport for off-site soil disposal.

5. EPA's selection of Alternative S15-B is improperly based on the erroneous assumption that it is comparable to S15-A in long-term effectiveness.

EPA states in section 12.1 of the OU7 ROD that “managing the excavated soil in an industrial/commercial area that can be reliably protected by ICs and engineering controls, S15-B is similar in long-term effectiveness to S15-A.” (ROD at 37). EPA has previously stated, in the Response to the Leech Lake Band of Ojibwe’s April 2, 2019 and January 9, 2019 Comments on the OU7 Proposed Plan, and Response to Issues Raised in March 19, 2019 Government-to-Government Consultation attached to the May 20, 2019 EPA letter from Director of Superfund and Emergency Management Division Director Douglas Ballotti to Chairman Jackson, that soil consolidated in OU1 or OU2 will be addressed as part of later soil remedial action selection for OU1 and OU2. Does EPA assume that the consolidated soil will comply with Level 1 PRGs for the operable unit where it is placed during OU7 remedial actions? The long-term effectiveness of on-site soil consolidation is only comparable to off-site disposal if there is no plan to further remediate the contamination that is being excavated from OU7 as part of the OU1 and OU2 remedial actions. Long-term effectiveness is based on the need for future action beyond the life of the remedial action. Therefore, S15-B is not comparable to S15-A regarding long-term effectiveness if there is a plan to further address the soil excavated from OU7 and consolidated in OU1 or OU2. The Tribe does not support any remedial plan that does not permanently remove contaminated soil exceeding HSCA standards and does not support the determination that Alternative S15-B is similar to S15-A in long-term effectiveness.

6. The Tribe disagrees with EPA's determination that S15-B is the most implementable because it does not rely on compliance with ICs.

EPA states in section 12.1 of the OU7 ROD that “Alternative S15-B is the most implementable because it does not rely on residents complying with ICs,” and that S15-B “is more implementable [than S15-A] due to fewer ICs.” (ROD at 37). While it is true that both S15 alternatives avoid the need for ICs on properties in OU7, S15-B requires substantially more ICs outside of OU7, but still on the Site, than any other alternative. S15-B requires the largest volume of excavated soil to be consolidated on-site and, therefore, will require more ICs to control access to the contaminated soil consolidated in OU1 or OU2 than other alternatives. S15-A is the only alternative that actually reduces the need for ICs across the entire site and should be considered the most implementable alternative for this reason.

7. EPA’s selection of Alternative S15-B over S15-A is not in accordance with applicable Federal and Tribal law because it allows contaminated soil to remain on the Reservation and because it relies on erroneously reasoning that S15-B has comparable Long-Term Effectiveness and Permanence and is more implementable than S15-A.

As discussed above, EPA’s determination that Alternative S15-B is comparable in long-term effectiveness to and more implementable than Alternative S15-A is erroneous. The weight of balancing criteria was improperly assigned when comparing alternatives to select the appropriate remedial action, this renders the selection of S15-B over S15-A arbitrary and capricious, an abuse of discretion, and not in accordance with applicable law. The lack of any continuing need for additional ICs following remediation of OU7 in Alternative S15-A renders that alternative more implementable than S15-B. Disposal of all soil exceeding Level 1 PRGs off-site lends a higher degree of long-term effectiveness and permanence to S15-A than S15-B. EPA should choose Alternative S15-A because it effectively eliminates the need for ICs within OU7 without increasing the need for ICs in other OUs and permanently addresses the contaminated soil that will be excavated from OU7.

8. EPA’s stated bias against off-site disposal of contaminants should not apply under the circumstances of sites located within the exterior boundaries of an Indian reservation.

As stated in section 13.4 of the OU7 ROD, there is an EPA bias against off-site disposal. (ROD at 41). The Tribe agrees that under different circumstances this bias is understandable. Generally, the bias against off-site disposal ensures that the burden of contamination remains on RP property and is not shifted to other resources within the same community or State. However, when the remedial activity addresses contamination within the boundaries of an Indian reservation, which is the subject of a treaty between the U.S. and the Tribe, the bias against off-site disposal flies in the face of the federal government obligation to the Tribe. This treaty right has the force and effect of a federal statute. It is plain error to place this burden on the Reservation community that has no responsibility for the contamination. Aware that the RP will ultimately be responsible for the cost of the remedial action, the Tribe considers off-site disposal as the only remedial action that will ensure the burden of contaminated soil does not remain on the reservation community. The Tribe suggests that the EPA reconsider its position on this matter and find its admitted bias against off-site disposal inappropriate under the unique circumstances present at the Site.

9. The Nature of Extent of Soil Contamination section of the ROD portrays that soil contamination at the Site is well characterized, despite data gaps and a lack of complete site characterization.

The Nature of Extent of Soil Contamination section portrays the Site as well-characterized without providing information that justifies such a conclusion. EPA describes one high level reading as a “lone exception”, yet the extent of the sampling does not justify using this phrase as there are still data gaps throughout OU7. The Tribe requests that EPA demand that PRPs fill these data gaps during remedial design.

The Tribe appreciates this opportunity to provide further comments to EPA regarding the OU7 ROD and would be happy to respond to any questions that EPA may have about these comments or the prior Tribal Comment Letters.

Sincerely,



Ben Benoit
Environmental Director
LLBO Division of Resource Management

Encl.

Exhibit A – LLBO Letter to EPA, January 9, 2019
Exhibit B – LLBO Letter to EPA, April 2, 2019
Exhibit C – LLBO Letter to EPA, August 15, 2019
Exhibit D – LLBO Letter to EPA, October 11, 2019

CC:

Tom Turner, US EPA Region 5
Barbara Wester, US EPA Region 5
Grace Elliot, Legal Director Leech Lake Band of Ojibwe



OGDEN MURPHY WALLACE, PLLC
901 FIFTH AVENUE, SUITE 3500
SEATTLE, WA 98164-2008

T 206.447.7000
F 206.447.0215

OMWLAW.COM

RICHARD A. DU BEY
206.470.3587
rdubey@omwlaw.com

Via Certified and Electronic Mail

January 9, 2019

Leslie Patterson, Remedial Project Manager
U.S. EPA, Region 5
77 West Jackson Boulevard
Mail Code: SR-6J
Chicago, IL 60604-3507

Re: Comments by the Leech Lake Band of Ojibwe regarding the EPA Proposed Plan St. Regis Paper Company Superfund Site, Leech Lake Reservation, Minnesota

Dear Ms. Patterson,

Thank you for the email you sent to John Persell on December 10, 2018 and the attached copy of EPA's St. Regis OU7 revised Proposed Plan ("Plan"). In your email, you requested comments from the Leech Lake Band of Ojibwe ("Tribe") by January 4, 2018. We understand that this date was then extended to January 9, 2019 at the request of the State of Minnesota ("State"). Your email stated that the due date was intended to ensure that "...the agencies have the time they need to fully review and comment on the proposed plan ... (and that the Tribe and the State should) ... feel free to call if (we) want to discuss."

Unfortunately, the unexpected government shut down has effectively denied us the opportunity to discuss the proposed plan with you. Accordingly, the Tribe respectfully requests that the Tribe's final comments need not be submitted to EPA until 15 days after the government shut down ends, so we have the opportunity to discuss the questions and concerns we have with the Plan. Nevertheless, based on our review to date the Tribe hereby submits the following preliminary comments for EPA's consideration in response to EPA's Proposed Plan for Addressing Dioxin-Contaminated Soil in Residential Areas at the St. Regis Paper Company Superfund Site.

I. Tribal Concerns

1. Groundwater and Drinking Water

The Plan states that the "HHERA found that exposure to groundwater was an incomplete exposure pathway in OU7. This means that residents and other persons in OU7 are not expected to be in contact with contaminated groundwater." (Plan at 7). Although it is true that the residential wells are not currently used for domestic purposes, the Tribe considers this situation to be temporary. Municipal water which is currently serving the area is a cost that is now burdening current and future residents as it is not paid for by IP.

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It further appears that Institutional Controls (“ICs”) will be required to ensure that people do not come into contact with the groundwater. As an example, John Persell has well water on his residential property that is contaminated which he uses for watering his garden. Therefore there is an opportunity for residents to be exposed to GW in the area. The ROD should address whether ICs will be required regarding groundwater.

2. Sampled Soil Acutely Toxic to Soil Invertebrates

The Plan states that “The HHERA did find one sample from an area near the containment unit in OU2 had high values of Site-related contaminants and was acutely toxic to soil invertebrates. This ecological risk will be addressed in a future remedial action.” (Plan at 7).

However, it is unclear if the highly contaminated sample was identified in OU7 near OU2, or within OU2 itself. The Plan states that this contamination will be addressed in a “future remedial action.” If this contamination is present in OU7 and this Plan becomes the final ROD for OU7, how and when will this hotspot be addressed in a future remedial action?

3. Status of Interim Residential ROD Actions

The Plan states that this is the final remedial action for OU7 and once implemented the Interim ROD actions will no longer be performed. (Plan at 8). Are there any actions protective of human health and environment that will be lost as a result of discontinuing Interim ROD actions?

The Interim residential ROD requires housecleaning. Will there be a final close-out house cleaning through the Interim ROD before it is abandoned, or an initial post-remediation house cleaning under the final ROD to ensure any remaining contamination is removed?

Roads are currently sprayed to reduce mobility of contaminants. Will the practice be continued under the Plan, or will the roads be dealt with in another way? It is not reasonable to leave the roads uncontrolled as they are well known to have been a source of contamination at the Site for many years.

4. Long Term Effectiveness and Protectiveness of Institutional Controls

The Plan states that “Alternative S14 would only require the RP to comply with ICs. The RP would be required by an enforcement agreement with EPA to place ICs on their property, and has unmediated access to these properties, so there is a high degree of long-term effectiveness for soil cover...” (Plan at 18). However, the use of ICs is inconsistent with Tribal policy.

Even though the RP is currently under an enforcement agreement with EPA – namely the unilateral order forcing the Interim ROD actions such as house cleaning and road spraying, the Tribe expects to be co-enforcement agency with EPA and to be recognized as an enforcement authority. To date, IP’s responsiveness to both EPA and especially the Tribe has been spotty. For example, IP has not consistently been responsive when the Tribe has requested that IP conduct road spraying (this recently occurred in Fall 2018, when an event attracted a large number of people to the area and IP did not spray

the roads ahead of time). Based on IP's ongoing reluctance to comply with the current requirements the Tribe has serious concerns regarding IP's ongoing responses and future compliance. Accordingly, the Tribe should have the right to participate in the ongoing monitoring and enforcement role regarding compliance with ICs.

5. Treatment of Contaminated Soil – On-Site Versus Off-Site Disposal of Contaminated Soil

The Plan states that "The containment area would be above the water table and would present the same conditions (redox, pH, etc.) which currently characterizes the soil. Therefore, onsite management of the soil would be very unlikely to increase the mobility of the contaminants." (Plan at 18). Evidence shows that the contaminants at the Site are currently quite mobile. For example, the Plan notes that a soil sample with a high level of contamination was found near the OU2 containment area. (Plan at 7). The specifics are unclear, but it appears this contamination may have come from the OU2 "containment area". Further, the Tribe recently provided information to EPA showing that Site contamination in the form of contaminated groundwater is not contained and that groundwater impacted by Site contaminants has migrated east of the channel between Pike Bay and Cass Lake and has come to be located off-Site.

The explanation set out in the Plan is not correct because the statements that on-site containment is "very unlikely to increase the mobility of contaminants," and that on-site containment ranks high in the "long-term effectiveness and permanence" factor are not supported by either factual or technical evidence. This reasoning is also flawed because the current mobility of the contaminants is demonstrably high. If this were not the case, house cleaning and road spraying would not be necessary and highly contaminated areas would not be adjacent to the containment areas. If on-site containment is to be considered to be a part of the proposed remedy, it must be established it will be more protective, and how it will remain so permanently. Are there provisions for the RP to monitor and be responsible for replacing the entire containment area when needed? Moreover, this soil placement option is also inconsistent with Tribal policy.

Additionally, the 2016 EPA PowerPoint presentation by Leslie Patterson for the previously proposed ROD mentions on-site storage of contaminated soils and states that "No leachable contamination would be allowed [in on-site storage]" (Factor #3: Disposal Location). The current Plan notes that "low level" contamination will remain on site, but does not distinguish between leachable and non-leachable contamination. EPA's last ROD proposal included this limitation for on-site storage and the same limitation should be included as a part of the current Plan. Clarification is needed as to whether this previously proposed limitation on the type of contaminated soils to be stored on-site will be included in the current Plan, and if not, why not.

6. Implementability

The Plan states that implementation becomes more difficult when larger amounts of soil are designated for off-Site disposal "due to the limited amount of appropriate landfill space available in Minnesota." (Plan at 20). This comment demonstrates how undesirable contaminated soils are and supports the Tribe's desire that all contaminated soil be removed from the Leech Lake Reservation. The

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Tribe has limited land and should not be forced to permanently allow any part of that land to be rendered unusable. Making a decision to permanently reduce the size or utility of the LLBO Reservation by the placement of contaminated soil through this Plan is unacceptable and a violation of Federal Indian Policy and Tribal law.

7. Impact to the Tribal Homeland

The Plan states that “Both a clean soil cover and excavation can permanently reduce exposure to soil contamination. Excavation removes contaminated soil permanently, while use of a clean soil cover requires ICs and ongoing monitoring and maintenance of the soil cover to prevent exposure. ... Factors in the evaluation of the long-term effectiveness of the soil cover include ... (4 factors listed)” (Plan at 17). While both cover and excavation may permanently reduce exposure to existing soil contamination, only excavation permanently reduces exposure. Under federal policy the Tribe is entitled to reacquire all Reservation lands including those on which EPA allows the RPs to build either a hazardous waste repository or hazardous waste landfill. In short, the RPs created the problem and they now need to be responsible to fully remediate OU7 so that all lands within the exterior boundaries of the Reservation may be used without restriction.

8. Compliance with ARARs

The draft proposed ROD notes that LLBO notified EPA of three Tribal Resolutions that may be potential ARARs for the remedial action. However, the Plan states that “[b]ecause each of these resolutions pertain specifically to the St. Regis Site, EPA cannot determine that any is a statute of general applicability. Therefore, EPA does not consider these Resolutions on their own or in the context of HSCA to be either ‘applicable’ or ‘relevant and appropriate.’” This analysis may be correct for Resolution 2015-27, as it provides a location-specific sampling protocol for residential properties within the St. Regis Site. However, Resolutions 05-16 and 2009-11 are requests that EPA take into account the Tribe’s Land Acquisition Policy when making Site decisions. Because the Resolutions refer to and request application of a generally applicable tribal policy they (or the Land Acquisition Policy itself) should be considered as ARARs. Furthermore, EPA is not competent to make this determination in the absence of Tribal input. At no time has EPA raised a question about the Tribal Resolutions. The Resolutions are matters of Tribal law and as a matter of comity the EPA should have asked for Tribal input so that it could make a fully informed decision.

9. Tribal Law

The Tribe takes the position that the HSCA and its regulatory standards are applicable and enforceable on the Reservation. We understand that EPA has not made a decision on this matter and further understand that the HSCA standard applicable here is independently supported by an EPA risk assessment. So long as the Tribal standard will serve as the basis for EPA’s determination as to what constitutes “heavily-contaminated soil (that) would be trucked off Site for disposal,” (Plan at 1) the Tribe will not, at this time, demand that EPA make a final determination that the Tribal HSCA is an ARAR at the Site.

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January 9, 2019
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10. Other Matters of Concern

a. In the Site history section of the Plan (2.2), EPA states that “a RCRA Subtitle C – Compliant unit (Containment value)” is located on the Site. Please let the Tribe know if this facility is subject to an EPA RCRA Order and if the PRPs are subject to specific compliance requirements. As this facility is over 30 years old, please advise if the construction and operation are in compliance with current EPA requirements.

b. In the EPA early response action section of the Plan (2.3), please include language that explains that the reason why EPA became the lead agency for the Site in 1995 was in response to the Tribe’s request.

c. In the EPA Plan at Sections 4.1 and 4.2, it should be clarified that the OU-1 groundwater plume is not contained and that the plume is impacting Tribal lands and resources east of the channel between Cass Lake and Pike Bay. In addition, it is not clear that the contaminated groundwater plume at OU7 is “an incomplete pathway.” Further study is needed before this can be confirmed.

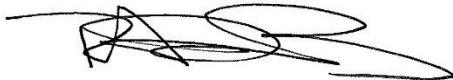
In addition, based on studies and analysis, the Natural Resource Trustees have determined that there is unacceptable ecological risk associated with the groundwater resources and impacted sediments and soils at the Site.

As noted above, the Tribe reserves the right to submit further comments after having had the opportunity to consult with EPA technical and legal staff regarding the Plan. The Tribal Council will also need to be briefed following the planned future discussions with EPA. The Tribal Council will then be in a position to make its decision noted in Section 8.18 of the Plan regarding whether EPA’s proposed remedial decision at OU7 is acceptable to the Tribe.

Respectfully submitted on behalf of the Leech Lake Band of Ojibwe.

Sincerely,

OGDEN MURPHY WALLACE, P.L.L.C.



Richard A. Du Bey

RAD:ms

cc: Rich Robinson, Leech Lake Band of Ojibwe
Ben Benoit, Leech Lake Band of Ojibwe
Jason Helgeson, Leech Lake Band of Ojibwe
John Persell, Leech Lake Band of Ojibwe
Leonard Fineday, Leech Lake Band of Ojibwe
Grace Elliott, Leech Lake Band of Ojibwe
Sarah Stahelin, Leech Lake Band of Ojibwe

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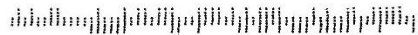


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Faron Jackson, Sr., Chairman
Arthur LaRose, Secretary-Treasurer
Robbie Howe, District I Representative
Steve White, District II Representative
LeRoy Staples Fairbanks III, District III Representative

April 2nd, 2019

Douglas E. Ballotti, Director Region 5 Superfund Division
US EPA Region 5
S-J9
77 West Jackson Blvd.
Chicago, IL 60604-3507

**Re: Summary of Conditions for LLBO support outlined for OU-7 Draft ROD
presented at 3.19.19 Consultation between Leech Lake Band of Ojibwe and EPA
Region 5**

Dear Mr. Ballotti,

This is Leech Lake's follow-up letter to our tribal consultation with your office on March 19, 2019.

1. Tribal Treaty Rights

The Leech Lake Reservation ("Reservation") was originally established for the Ojibwe in the Treaty of 1855. This treaty recognizes the inherent right of the Ojibwe to hunt, fish, gather, and reside in peace in perpetuity on the reserved lands. These reserved lands continue to be the homelands of the Leech Lake Band of Ojibwe ("Tribe").

The trust responsibility of the federal government and the Environmental Protection Agency to sovereign Tribal governments is ongoing. One of these trust obligations is to ensure that the homelands of indigenous people reserved in executed treaties are protected from unnecessary encroachment. The contamination of Reservation soil and water is a dangerous and unnecessary encroachment into the homelands of the Tribe. The Tribe continues to rely on EPA to fulfill its trust obligation to protect the Tribe's rights.

The Tribe believes that removal of contamination from the Reservation is the only way to adequately protect its homelands and thus requests that EPA commit to stating that it is their intention to remove all contamination relating to the St. Regis Superfund site from the Leech Lake Reservation. This commitment from EPA is necessary to ensure protection of our homeland and our treaty rights.

190 Sailstar Drive NW, Cass Lake, MN 56633
Telephone: 218-335-8200 • Fax: 218-335-8309

2. Conditions for Leech Lake Band of Ojibwe Support of OU-7 ROD

The Tribe is conditionally supportive of the proposed remedy because it will meet or exceed preliminary clean-up goals established by the Tribal HSCA clean-up standards for all of OU-7 and because no post-remediation institutional controls would be required for the properties within OU-7. However, the Tribe respectfully requests that EPA commit to meeting the following conditions:

a. Recontamination

EPA will require monitoring and any other actions necessary to preclude recontamination from other areas of the Site during remediation. EPA will also commit to post-remediation sampling to assure that recontamination does not take place.

b. Data Gaps

EPA will assure that the current data gaps in OU-7 soils sampling will be addressed during remedial design. The Tribe will be provided an opportunity to provide input regarding soil sampling plans and locations. The Tribe will be provided with sampling data and selected split samples as necessary to be assured that data gaps have been addressed prior to the implementation of remedial action.

c. Confirmation Sampling

EPA will ensure that confirmation sampling takes place during remedy implementation to assure the Tribe that clean up levels are achieved for all areas within OU-7. The Tribe will be permitted to monitor the confirmation sampling and related processes and be provided with selected split samples so that it may independently confirm compliance with Tribal clean-up standards and advise its members accordingly.

d. Recognition of Tribal ARARs

EPA will confirm that the Leech Lake Band of Ojibwe Hazardous Substance Control Act (HSCA) is being adopted as the applicable ARAR for this remedial action. The adaptation of the Tribal HSCA is essential to support Tribal Sovereignty, further the development of the Tribe's regulatory program, and maintain EPA alignment with the 1984 Indian Policy and the recognition that the Leech Lake Band of Ojibwe is a sovereign government empowered to set standards for clean-up of hazardous waste within the exterior boundaries of the Leech Lake Reservation.

The dioxin standard proposed in the draft OU-7 ROD is based on the health risk analysis conducted by EPA and matches the dioxin standard independently set forth in the Tribe's HSCA. EPA shared its concern that use of the HSCA dioxin standard as an ARAR for the OU-7 clean-up might increase the risk of litigation by the responsible parties opposing the standard. However, there is currently no guarantee that the responsible parties will not pursue legal recourse regarding the standards in the draft OU-7 ROD, and history suggests that they responsible parties are likely to take legal recourse no matter what standard is adopted by EPA. Further, if EPA is confident that its health risk analysis supports use of this cleanup standard, it is unclear why use of this standard as an

ARAR would not in fact strengthen EPA's case for use of the standard by providing additional independent authority supporting its use.

When the Tribal HSCA was pending BIA approval in 2001, one of the responsible parties opposed the Tribe's authority to enact cleanup standards. Ultimately, the Department of Interior sided with the Tribe, confirming that the Band has the inherent authority to regulate itself and set standards that reflect the Tribe's unique values and priorities when considering its homeland. We ask the EPA to follow BIA's lead, and its own policy regarding the setting of applicable standards on Indian Reservations:

THE AGENCY WILL RECOGNIZE TRIBAL GOVERNMENTS AS THE PRIMARY PARTIES FOR SETTING STANDARDS, MAKING ENVIRONMENTAL POLICY DECISIONS AND MANAGING PROGRAMS FOR RESERVATIONS, CONSISTENT WITH AGENCY STANDARDS AND REGULATIONS.

In keeping with the principle of Indian self-government, the Agency will view Tribal Governments as the appropriate non-Federal parties for making decisions and carrying out program responsibilities affecting Indian reservations, their environments, and the health and welfare of the reservation populace. Just as EPA's deliberations and activities have traditionally involved the interests and/or participation of State Governments, EPA will look directly to Tribal Governments to play this lead role for matters affecting reservation environments.

EPA Policy for the Administration of Environmental Programs on Indian Reservations, *Policy #2*, (March 14, 1994).

e. Protect the Tribal Homeland

EPA cannot take action inconsistent with its treaty obligations to protect and preserve all lands and waters within the boundaries of the Leech Lake Reservation ("Tribal Homeland"). EPA has committed to compliance with Tribal clean-up standards within OU-7, but the Tribe is deeply concerned that the agency may nevertheless allow the responsible parties to permanently dispose of soils contaminated with dioxin at levels exceeding the HSCA standard at another location within the Tribal Homeland.

Federal policy favors and provides for Tribal homelands to be made whole so that Reservation lands and waters may sustain Tribal communities and serve as their permanent Tribal Homeland for all time. The Tribe views all lands – whether in trust or fee status – to be part of the Reservation Homeland for current and future generations and that all fee lands are subject to acquisition by the Tribe so that the fee parcels can be returned to trust status. However, the BIA will not allow contaminated property that does not comply with the Tribe's clean-up levels to be placed into non-taxable trust status.

Allowing responsible parties to use a portion of the Tribal Homeland (whether in fee or trust status) as a dump site for the purpose of saving money effectively transfers direct and emotional costs to the Tribe in violation of the Federal government's treaty obligation to the Tribe. We respectfully request that EPA not cause the Tribe and its members further pain and anguish by making a decision that solves a short-term problem

LLBO Letter to EPA
April 2, 2019

for the responsible parties by creating a long-term contamination problem for the Tribe, its members and the Cass Lake community.

Moving contaminated soils from OU-7 to OU-1 or OU-2 and delaying the decision to permanently remove these soils from the Leech Lake Reservation in a future ROD is not a definition of "temporary storage" that LLBO will support. A definite timeline to address these soils, including financial assurances and protections to ensure no recontamination of OU-7 occurs, is needed.

Sincerely,

A handwritten signature in black ink, appearing to read "Faron Jackson Sr.", written over a horizontal line.

Faron Jackson Sr.
Tribal Chairman
Leech Lake Band of Ojibwe

cc:

U.S. Representative Betty McCollum (MN, 5th District)

U.S. Senator Amy Klobuchar

U.S. Senator Tina Smith

Benjamin Benoit, Leech Lake Environmental Director

Leslie Patterson, Remedial Project Manager US EPA Region 5



LEECH LAKE BAND OF OJIBWE

Faron Jackson, Sr., Chairman
Arthur "Archie" LaRose, Secretary-Treasurer
Robbie Howe, District I Representative
Steve White, District II Representative
LeRoy Staples-Fairbanks III, District III Representative

August 15, 2019

VIA U.S. MAIL and ELECTRONIC MAIL

Heriberto Leon, Community Involvement Coordinator
U.S. Environmental Protection Agency
Mail Code SI-6J
77 W. Jackson Blvd.
Chicago, IL 60604
leon.heriberto@epa.gov

Re: Leech Lake Band of Ojibwe's Public Comments on EPA's Proposed Plan for Addressing
Dioxin-Contaminated Soil in Residential Areas at Operable Unit 7 of the St. Regis Paper
Company Superfund Site

Dear Mr. Leon,

This letter transmits the Leech Lake Band of Ojibwe's ("Tribe") public comments on EPA's proposed plan for addressing soil contamination within operable unit 7 ("OU-7") at the St. Regis Paper Company Superfund Site ("Site") located in Cass Lake, Minnesota ("Proposed OU-7 ROD").

The Tribe has previously provided detailed comments to EPA regarding the Draft Proposed OU-7 ROD in letters dated January 9, 2019 and April 2, 2019 ("Tribal Comment Letters").¹ Copies of the Tribal Comment Letters are attached hereto as Exhibits A and B. As only limited changes have been made between issuance of the Draft Proposed and the current Proposed OU-7 ROD, the comments set out in the Tribal Comment Letters remain valid and relevant and are by this

¹ EPA responded to the issues raised in the Tribal Comment Letters and during a Government-to-Government Consultation in a May 20, 2019 letter from Douglas Ballotti, Director of EPA R5 Superfund and Emergency Management Division to LLBO Chairman Faron Jackson Sr. The Tribe considers that Consultation process to be ongoing and provided a partial response to EPA dated August 9, 2019. The Tribe's letter noted a more substantive response to EPA's comments was to follow. As those comments are a continuation of the Consultation process, the Tribe feels that response is best addressed separate from these public comments on the Proposed OU-7 ROD.

reference incorporated into and made part of this letter to EPA regarding the Proposed OU-7 ROD.

Below are the Tribe's primary objections to the Proposed OU-7 ROD.

1. The Tribe objects to the Proposed OU-7 ROD to the extent that it will result in the movement and placement of contaminated soils exceeding HSCA standards from the OU-7 area to another location within the Leech Lake Indian Reservation.

EPA's preferred alternative, S15-B, would excavate all soil on OU-7 with contamination above Level 1 Preliminary Remediation Goal (PRG) levels, and with the exception of as-yet undefined "heavily contaminated soils", consolidate the soils exceeding the Level 1 PRG in an on-Site containment area. The Proposed OU-7 ROD states that the on-Site containment area is on property owned by a responsible party. Alternative S15-A would provide clean-up to the same standards as S15-B, but contaminated soils would be taken off-Reservation rather than consolidated on-Site.

The Tribe objects to any remedial action that results in the permanent placement of contaminated soils exceeding the standards set forth in the LLBO Hazardous Substance Control Act (HSCA) within the Reservation environment.²

The federal government's trust responsibility to the LLBO arises from the Treaty of 1855 and obligates EPA and other federal agencies to ensure that the homelands of indigenous people reserved in executive treaties are protected from unnecessary encroachment. Site-related contamination of Reservation soil and water is a dangerous and unnecessary encroachment into the homelands of the Tribe and the Tribe believes that the removal of contamination exceeding HSCA standards from the Reservation is the only way to adequately protect the Tribal Homeland.

Because the Proposed OU-7 ROD does not define "highly contaminated soils" as those soils exceeding the HSCA standard and does not provide any assurance that the stockpiled consolidated contaminated soils will be removed from the Reservation, the Tribe cannot support the Proposed OU-7 ROD. EPA has indicated to the Tribe that a future determination regarding the operable unit where the soils are to be consolidated will address the final disposition of the contaminated soils, but EPA has not provided the Tribe with a written commitment to that effect and has likewise provided no indication of when such a determination will be made. Moving contaminated soils from OU-7 to OU-1 or OU-2 and not requiring the responsible party to commit to further action by delaying the decision to permanently remove these soils from the

² The Reservation Environment is defined as all lands and waters within the exterior boundaries of the Leech Lake Indian Reservation.

Leech Lake Reservation in a future ROD is a non-decision, which puts all of the risk on the Tribe and is inconsistent with any definition of "temporary storage" that the Tribe could support.

Shifting the contaminated soil burden from the PRP to the Tribe without a meaningful definition of "heavy contamination" or "temporary storage" that the Tribe is able to use to make a fully informed decision regarding their disposition of the proposed OU-7 remedy is also inconsistent with the 1984 Indian Policy and Executive Order 12898. The considerations at this Site are different than other sites due to its location being entirely within an Indian Reservation, which has been designation by EPA as an Environmental Justice site ("EJ Site"). The EJ Site designation amplifies EPA's obligation to act and consider criteria factors in a manner consistent with its federal trust obligation and in consideration of the long term impacts this decision will have on a community that continues to experience disproportionate exposure to environmental hazards and suffers from increased vulnerability to such hazards.

Without assurances that contaminated soils will be removed in the future, the Proposed OU-7 ROD will likely result in the permanent storage of contaminated soils in OU-1 or OU-2 and thus shift the burden of contamination to the Tribe. Thus perpetuating further socioeconomic and environmental injustices onto a Tribal and non-Tribal EJ Site community that has been historically plagued with these problems.

Through verbal and written testimony, the Tribe has consistently voiced its concern that permanent storage of contaminated soils within the exterior boundaries of the Leech Lake Reservation limits the Tribe's ability to place parcels of fee land into federal trust status, and thus would disproportionately effect our community. The Leech Lake Reservation is the permanent home of the Leech Lake Band of Ojibwe. Recovering our lands is a Tribal priority that must be considered by EPA, regardless of current land ownership. These concerns were loudly expressed at the community meeting hosted by EPA on July 16, 2019, and the previous community meeting hosted by EPA in 2014 regarding a previous proposed OU-7 ROD. The Proposed OU-7 ROD is not consistent with EPA guidance, EPA's federal trust obligation, and does not adequately address the site considerations or appropriately consider the ongoing socioeconomic consequences to the EJ Site community.

The Tribe's concerns regarding future productive land use are highlighted by International Paper's ("IP") August 19, 2019 (sic) comments on the Proposed OU-7 ROD, which note that IP owns and will place deed restrictions on 41 properties in OU-7 to prevent future residential use of the OU-7 area. IP makes a point of requesting that EPA recognize that "the vast majority of the land in OU7 will never be in residential use", and asks for "flexibility to recognize the potential for properties currently in OU7 to be moved into OU1 based on zoning, actual land use or deed restrictions." (emphasis added). IP's argument for permanent removal and severance of the Leech Lake Reservation land from residential use would preclude the Tribe and the City of Cass Lake from utilizing a significant portion of the Reservation's population center. Environmental justice concerns applicable at this Site compel EPA to not allow a responsible

115 Sixth St NW, Cass Lake, MN 56633
Telephone: 218-335-8200 Fax: 218-335-8309

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party to avoid its responsibility to clean up the Site by purchasing lands to be fenced off in violation of the federal policy favoring the return of fee land to trust status, and EPA's treaty obligation to preserve and protect the Tribal homeland.

The Tribe recognizes that its comments at this time are directed to specifically address the Proposed OU-7 ROD. Nevertheless, the Tribe encourages EPA to establish an appropriate timeline for development and issuance of remedial plans for the other operable units at the Site. The sixth five-year review of the Site will soon be underway but despite more than thirty years of work the Site contaminants have not yet been contained. The Tribe appreciates EPA's goal of addressing OU-7 as the operable unit posing the most direct threat to human health, but the work to address OU-7 does not displace EPA's responsibility to the remainder of the Site.

2. EPA should adopt the LLBO HSCA as an applicable ARAR for this remedial action.

EPA's adoption of the HSCA as an ARAR for this remedial action is essential to recognize the inherent sovereignty of the Tribe. As EPA is well aware, the Tribal cleanup standards in HSCA are based upon sound science, as is demonstrated by EPA's selection of a 10 part per trillion Level 1 PRG for dioxin cleanup at the Site based on EPA's recent risk assessment, which is identical to the dioxin standard independently set forth in the HSCA.

EPA has explained how it arrived at the Level 1 PRG for dioxin in this remedial action. However, EPA has not provided sufficient justification for its reluctance to adopt the HSCA standard as an ARAR, as the HSCA is a promulgated and generally applicable environmental statute. EPA's recognition of the HSCA standard as an ARAR will further the development of the Tribe's regulatory program, maintain EPA alignment with the 1984 Indian Policy³ and the recognition that LLBO is a sovereign government empowered to set standards for cleanup of hazardous waste within the exterior boundaries of the Leech Lake Reservation.

3. EPA should enter into a Cooperative Enforcement Agreement with the Tribe.

The Tribe recently provided a letter to EPA expressing its interest in entering into a Superfund Memorandum of Agreement for remedial design to enhance the Tribe's role in participating at the Site as an enforcement agency partner.⁴ The Tribe requests that it be permitted to fully participate in Remedial Design and the subsequent Remedial Action process as a cooperative

³ "In keeping with the principle of Indian self-government, the Agency will view Tribal Governments as the appropriate non-Federal parties for making decisions and carrying out program responsibilities affecting Indian reservations, their environments, and the health and welfare of the reservation populace, ... EPA will look directly to Tribal Governments to play this lead role for matters affecting reservation environments." EPA Policy for the Administration of Environmental Programs on Indian Reservations, *Policy #2* (March 14, 1994).

⁴ The Tribe has provided notice to IP and BNSF that they are deemed to be responsible parties under the Tribal HSCA subject to Tribal enforcement action.

August 15, 2019
Page 5

enforcement agency under CERCLA for the purpose of sampling and related processes at the Site, and that it be provided with split samples so it may independently confirm compliance with Tribal cleanup standards and advise its members accordingly. A more detailed account of the Tribe's proposed role is set out in the Tribal letter attached as Exhibit B at pages 2-4.

The Tribe appreciates this opportunity to provide further comments to EPA regarding the Proposed OU-7 ROD and would be happy to respond to any questions that EPA may have about these comments or the prior Tribal Comment Letters.

Very truly yours,



Benjamin Benoit
Environmental Director
LLBO Division of Resource Management

Encl:

Exhibit A - *LLBO letter to EPA, January 9, 2019*
Exhibit B - *LLBO letter to EPA, April 2, 2019*

cc:

Faron Jackson Sr., LLBO Chairman
Arthur LaRose, LLBO Secretary/Treasurer
Robbie Howe, LLBO District 1 Representative
Steve White, LLBO District 2 Representative
LeRoy Staples Fairbanks III, District 3 Representative
Grace Elliot, Director LLBO Legal Office
Jason Helgeson, LLBO-DRM

115 Sixth St NW, Cass Lake, MN 56633
Telephone: 218-335-8200 Fax: 218-335-8309

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LEECH LAKE BAND OF OJIBWE

Faron Jackson, Sr., Chairman
Arthur "Archie" LaRose, Secretary-Treasurer
Robbie Howe, District I Representative
Steve White, District II Representative
LeRoy Staples-Fairbanks III, District III Representative

October 11, 2019

VIA U.S. MAIL

U.S. Environmental Protection Agency
W.C. "Chad" McIntosh
Assistant Administrator Office of International and Tribal Affairs
1300 Pennsylvania Ave, NW
Mail Code 2610R
Washington, DC 20004

U.S. Environmental Protection Agency
Peter Wright
Assistant Administrator Office of Land and Emergency Response
1300 Pennsylvania Ave, NW
Mail Code 5101T
Washington, DC 20004

**Re: Leech Lake Band of Ojibwe's Concerns regarding EPA Region 5 Tribal
Engagement at the St. Regis Paper Company Superfund Site and EPA's OU7 ROD**

Dear Messrs. McIntosh & Wright,

I am writing today to request continuation of the formal government-to-government consultation between the Leech Lake Band of Ojibwe (LLBO or Tribe) and EPA that commenced on March 19, 2019 regarding the proposed OU7 Record of Decision (OU7 ROD). In his May 20, 2019 letter following-up on issues discussed during the government-to-government consultation videoconference between LLBO and EPA, Region 5 Superfund Director Doug Ballotti indicated that EPA believed that the government-to-government consultation on the OU7 matter had concluded. As indicated in LLBO's public comments on the OU7 ROD submitted to EPA on January 9, 2019 the Tribe does not feel that meaningful consultation has occurred regarding this

October 11, 2019

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matter and considers that this consultation is ongoing. We respectfully request a meeting to continue the government-to-government consultation regarding the Site and EPA's proposed OU7 ROD while we are in Washington D.C. on the afternoon of October 22nd or anytime October 23rd, 2019.

Due to the long-term ramifications of this decision and the lack of accountability shown by EPA Region 5 in this matter, it is my duty as an elected leader of the Leech Lake Band to attempt to achieve resolution regarding these pressing matters. Accordingly, through this letter I seek to continue the LLBO government-to-government consultation with EPA at the Headquarters level where these concerns can be adequately addressed.

As a sovereign government recognized by the United States, LLBO successfully interacts with many federal partners on a variety of issues affecting the Leech Lake Indian Reservation and its members. I pride myself in building strong partnerships and being a good neighbor through engaging in open and honest discourse. In the past, when working with other federal and local agencies during a decision-making process there has been an effort to resolve disputes before actions are taken. Unfortunately, this has often not been LLBO's experience in its interactions with EPA R5 staff regarding the concerns of LLBO regarding the Site in general and the OU7 ROD specifically. This is unfortunate. I believe the Tribe and EPA's intentions for the Site are largely aligned and the foundation for a strong partnership exists. Regrettably, it seems the relationship with EPA Region 5 staff has been combative rather than supportive to the point that an impasse exists regarding issues of critical importance to the Tribe, namely the long-term on-Site storage of contaminated soils and the applicability of Tribal law at the Site.

I. LLBO'S RELATIONSHIP WITH EPA

Over nearly three decades, the Tribe has expressed its concerns regarding the Site through extensive comments to EPA response to numerous Site documents and issues including but not limited to:

1. the inaccurate Conceptual Site Model;
2. the lack of comprehensive investigative reports;
3. the limited and incomplete Human Health and Ecological Risk Assessment;

115 Sixth St NW, Cass Lake, MN 56633
Telephone: 218-335-8200 Fax: 218-335-8309

4. the 1st, 2nd, 3rd, 4th and 5th Five-Year Review Reports all of which failed to find that the remedial actions were not protective of human health and the environment;
5. incomplete and misleading Annual Reports;
6. a Draft Feasibility Study (FS) not supported by a comprehensive RI; and
7. most recently the Draft Proposed OU7 ROD.

The Tribe has also engaged in the formal government-to-government consultation process with EPA several times to discuss and share information regarding the Site and made other efforts to provide information to EPA regarding Tribal authorities and their applicability to Site-related matters. Further, two petitions have been filed with EPA by the Tribe pursuant to Section 105(d) of CERCLA to request preliminary assessments of uncharacterized Site-related contamination. The first, in April 2014, was prompted by data revealing the presence of Site-related hazardous substances at the City Dump. The second, submitted in August 2019 and still pending, was prompted by data collected by the Tribe confirming its long-held suspicions that Site-related hazardous substances extend east beyond the channel separating Pike Bay from Cass Lake.¹

Additionally, in response to a comment in Mr. Ballotti's May 20, 2019 letter to LLBO following-up on the government-to-government consultation, the Tribe submitted a letter to EPA Region 5 requesting discussions regarding a potential Superfund Memorandum of Agreement between LLBO and EPA to allow LLBO to more fully participate in remedial design activities at the Site.² Despite the significant adverse impacts of the site on the Tribal lands and its membership, the Tribe's extensive efforts to act as a partner with EPA regarding Site-related issues and our valid concerns continue to be dismissed in Site-related decisions by EPA.

II. THE TRIBE'S CONCERNS

The Federal government bears a special trust responsibility on behalf of Indian Tribes. Pursuant to that longstanding legal obligation, EPA adopted a Tribal Policy to guide agency actions and decision-making. The Tribal Policy enshrines EPA's commitment to granting special

¹ See Petition for Assessment of Release to Cathy Stepp, EPA Region 5 Administrator by Richard Du Bey, Special Environmental Counsel for the Leech Lake Band of Ojibwe, (August 22, 2019). Enclosed.

² See Letter from Richard Du Bey, Special Environmental Counsel to the Leech Lake Band of Ojibwe to Tom Turner, Office of Regional Counsel EPA Region 5 (August 9, 2019). Enclosed.

consideration to Tribal interests in agency decisions, actions, and policies. *See* EPA, Policy for the Administration of Environmental Programs on Indian Reservations (Nov. 8, 1984). The fundamental objective of the Tribal Policy is to "protect human health and the environment." *Id.* To that end, EPA recognizes Tribal governments as the primary parties for making environmental policy decisions affecting Reservations. *Id.* at Policy 2. Additionally, the agency is obligated to assure Tribal concerns and interests are given special consideration whenever EPA's actions or decisions may affect Tribal interests. *Id.* at Policy 5; *see also* EPA, Policy on Consultation and Coordination with Indian Tribes, at Policy 4 (May 4, 2011).

The Site has long been a significant concern for our Tribal Citizens as well as the non-Band residents of the City of Cass Lake. Many of our population do not know a world where the Site has not posed a threat to their well-being. I say this and tell this history so that you can view this matter through the lens of the Tribe and the local population that lives under the dark cloud created by the legacy of contamination at the Site and its impacts on the surrounding area.

A consequence of the failure to remediate the Site in the decades since it was placed on EPA's NPL list is that many of the area's residents and businesses have since left or died. Due to the widespread contamination and the lack of a clear timeline associated with the cleanup, the market for the homes on or adjacent to the site was non-existent and the current parcel ownership of the St. Regis Site reflects this, as this situation facilitated International Paper purchase many properties in the area. These parcels now sit vacant, precluding the productive use of a significant portion of the land in the City of Cass Lake and reducing the likelihood that these properties will be fully cleaned-up. The uncertain future of the remaining contamination has cast a dark shadow over the area, which has been designated by EPA as an "environmental justice" site.

The Tribe laments EPA's continual and systemic failure to uphold its trust responsibilities and implement its Tribal Policy in good faith regarding the Site cleanup. EPA assumed regulatory control of the Site decades ago from the State of Minnesota. In the many years that have passed:

- new contaminated areas have been discovered and added to the Site (City Dump);
- groundwater contamination along Fox Creek has gone unaddressed;
- EPA has refused to substantively address the admittedly failing groundwater remedy; and

- the agency has ignored significant evidence that exposure pathways exist that threaten the health of local residents.

Further, despite its receipt of evidence provided by the Tribe in November 2018 that significant groundwater contamination extends beyond the Site boundaries east of the channel, and the fact that the Site is included on the Administrator's list of high-priority Superfund sites, EPA took no action to respond to this information. Consequently, due to the Tribe's concern about the existence of additional significant uncharacterized exposure pathways in August 2019, the Tribe formally requested action from EPA through a formal CERCLA 105(d) petition. The fact that new contamination continues to be identified decades after the Site was listed on the NPL illustrates the incomplete nature of the remedy and highlights the need for a revised approach.

As a general matter, the Tribe has long expressed its belief that the lack of a comprehensive remedial investigation and feasibility study at the Site hinders an efficient and sufficiently protective response. On January 10, 2011 the Tribe expressed these same concerns in a letter to Superfund Director Richard Karl stating that, "[u]nfortunately, EPA has chosen to ignore the Tribe's consistent and most fundamental concern that a complete and comprehensive Site remedial investigation (Comprehensive RI) was not prepared for this Site. It is the Tribe's position, that a Comprehensive RI is a prerequisite to EPA's ability to move forward in a fully informed manner."

Though the Site is on the Administrator's priority list and affects the Tribal treaty rights of a designated Environmental Justice community, substantive remedial actions at the Site are still undefined and incomplete, in part due to the lack of a comprehensive understanding of the contamination at the Site.

As briefly discussed below, beyond this general deficiency the Tribe has significant concerns regarding EPA's proposed plan to move contaminated soils from OU7 to another location within the exterior boundaries of the Leech Lake Reservation (Reservation), for what it has dubiously characterized as "temporary" storage. The Tribe is also deeply troubled by EPA's refusal to acknowledge that Tribal law, specifically the LLBO Hazardous Substances Control Act (HSCA), is applicable as an ARAR at the Site.

A. EPA's ROD for Residential Soils at OU7 is not consistent with the United States' obligation to honor its treaty relationship with the Leech Lake Band of Ojibwe

Ensuring that the homeland reserved for our Tribal Citizen is clean for our children and their children is the lens through which we view EPA's proposed actions at the Site. EPA's proposal for addressing contaminated soils at OU7 is not consistent with Tribal law, LLBO priorities, EPA's Indian Policy, or the trust responsibility that EPA is obligated to uphold.

The Tribe has consistently voiced its objection to permanent storage of contamination on any portion of the Leech Lake Reservation. Doing so shifts the contamination burden from the Site's responsible parties to the Tribe. It is the responsibility of those parties to address their legacy of contamination and to make the Tribe whole, something that is not accomplished by simply shifting contamination exceeding the Tribal environmental standards from one location within the Reservation to another.

The Tribe has significant concerns regarding any remedy that involves purported "temporary" storage of contaminated soils within the boundaries of the Leech Lake Reservation. These concerns are rooted in the Tribe's past experiences with "temporary" stockpiling of contaminated soils from the Site. (SEE SCB # 631996, which references the 6/23/08 letter). Over a decade ago, in a letter to EPA dated June 23, 2008 the Tribe expressed its position that the consolidation of contaminated materials for temporary storage in the Soil Vault Unit was, at best, an interim means of containing an immediate threat pending the implementation of a permanent long-term solution. The Tribe requested that EPA take every step necessary to ensure the Site's PRPs took appropriate action to identify and implement a permanent remedy for the contaminated soil and other hazardous substances within the Soil Vault unit. This request remains unsatisfied today.

Now, EPA again asks the Tribe to accept "temporary" stockpiling of the contaminated soils during the OU7 residential soils remediation on properties located within the boundaries of the Leech Lake Reservation. We feel that EPA R5 is disingenuous when claiming that a decision regarding the final disposition of the soil removed from OU7 will be deferred to a future ROD for OU1 or OU2 when the past actions (or lack thereof), proposed storage methods of contaminated soils in the draft OU7 ROD, and inability to recognize applicability of Tribal standards as the ARAR strongly suggest that the EPA will allow these contaminants to remain in place as a permanent burden on the Tribe's limited land base. The Tribe's distrust is amplified by EPA

Region 5's lack of a satisfactory response to the Tribe's questions regarding EPA's justification of its selection of Alternative 15B over Alternative 15A, the only difference between the two alternatives being the disposition of contaminated soils. EPA indicated that the cost of removal and disposal of contaminated materials is prohibitive at this time, ignoring the fact that such costs are only expected to increase in the future.

As noted in a letter submitted to EPA by U.S. Senators Smith and Klobuchar dated October 7, 2019, one of the evaluation criteria to be considered when considering cleanup alternatives is "State and Tribal acceptance." The Senators note that the Minnesota Pollution Control Agency is neutral on the question of offsite versus onsite storage, however the Tribe has expressed strong objection to retaining contaminated soils on Tribal land. The Tribe shares the Senators' concern that "EPA's initial preference for onsite storage seems to discount the wishes of the Leech Lake Band."³

B. LLBO's Hazardous Substances Control Act should appropriately be considered an ARAR at the Site by EPA.

The Leech Lake Hazardous Substances Control Act of 2001 and its regulatory standards are applicable and enforceable on the Reservation and thus should be recognized as an ARAR by EPA. I understand that EPA has not formally made a decision on this matter and further understand that the HSCA standard we believe is applicable as a Site ARAR has been independently supported by an EPA risk assessment. In its comments on EPA's draft proposed OU7 ROD the Tribe previously communicated to EPA that if the HSCA dioxin standard will serve as the basis for EPA's determination as to what constitutes "heavily-contaminated soil (that) would be trucked off Site for disposal," under the proposed OU7 ROD the Tribe would not demand that EPA make a final determination that the Tribal HSCA is an ARAR at the Site. Unfortunately, it is our understanding that EPA is not planning on using this dioxin standard as the threshold for determining whether soil is trucked off-Reservation for disposal. The Tribe's public comments on EPA's proposed OU7 ROD submitted to EPA on August 15, 2019 includes detailed discussions of

³ See Letter from U.S. Senators Tina Smith and Amy Klobuchar to EPA Region 5 Administrator Cathy Stepp (October 7, 2019). Enclosed.

the Tribe's objections regarding EPA's failure to acknowledge HSCA as an ARAR and to EPA's proposed movement and placement of contaminated soils from OU7 exceeding HSCA standards to another location within the Reservation.⁴

EPA's adoption of the HSCA as an ARAR for this remedial action is essential to recognize the inherent sovereignty of the Tribe. As EPA is well aware, the Tribal cleanup standards in HSCA are based upon sound science, as is demonstrated by of EPA's selection of a 10 part per trillion (ppt) Level 1 PRG for dioxin cleanup at the Site based on the Human Health and Ecological Risk Assessment ("HHERA"), which is identical to the dioxin standard independently set forth in the Tribe's HSCA. While EPA has explained how it arrived at the Level 1 PRG for dioxin in this remedial action, it has not provided sufficient justification for its reluctance to adopt the HSCA standard as an ARAR, as the HSCA is a promulgated and generally applicable environmental statute. EPA's recognition of the HSCA standard as an ARAR will further the development of the Tribe's regulatory program, maintain EPA alignment with the 1984 Indian Policy and the recognition that LLBO is a sovereign government empowered to set standards for cleanup of hazardous waste within the exterior boundaries of the Leech Lake Reservation.

Accordingly, as HSCA and its standards meet all criteria for inclusion as a Site ARAR, the Tribe seeks an opportunity to discuss EPA's refusal to acknowledge the applicability of this Tribal law and the steps necessary to achieve proper consideration of applicable Tribal law by EPA.

III. CONTINUATION OF GOVERNMENT-TO-GOVERNMENT CONSULTATION REGARDING SITE AND OU7 ROD

Sovereignty has many meanings. An underlying principal of sovereignty that resonates with me is that "the people that live with a decision, are the ones who should be making it." EPA hosted a public meeting on July 15th, 2019 to present its proposed plan for OU7 to the community and receive feedback from those who will be directly impacted by the OU7 ROD. Leech Lake Environmental Director Ben Benoit invited Regional Superfund Director Doug Ballotti, who participated in the March 19, 2019 government-to-government consultation meeting regarding

⁴ See Letter from Ben Benoit to Heriberto Leon, Re: Leech Lake Band of Ojibwe's Public Comments on EPA's Proposed Plan for Addressing Dioxin-Contaminated Soil in Residential Areas at Operable Unit 7 of the St. Regis Paper Company Superfund Site (August 15, 2019). Enclosed.

EPA's draft proposed OU7 ROD, to visit the Reservation, participate in the public meeting, and witness how the community forced to live with the Site's impacts feels about the proposed action. This invitation was extended to help ensure the leadership of EPA Region 5 understood the significance of the future impacts of the remedy selected. Mr. Ballotti declined this invitation and instead sent staff to attend in his place and thus missed an opportunity to better understand the consequences of EPA decisions that will impact our Tribal Citizens and community.

The population of the City of Cass Lake is 760 people. Over seventy Tribal and community members attended this public meeting. The attendees expressed overwhelming opposition to the proposal for long-term storage of contaminated soils on the Reservation and a petition was presented in opposition to the proposal as well. While seventy people may seem like a small number in Chicago or Washington DC, it represents a significant percentage of the total population of the City of Cass Lake. Here is how the Region summarized this event in the draft OU7 ROD:

"EPA received numerous written and oral comments on the PP. The majority of the commenters prefer Alternative S15-A, because it would remove all soil contaminated above the HSCA cleanup level for dioxin to a landfill located outside of the Leech Lake Reservation"

While the voice of our community may have fallen on deaf ears within EPA Region 5, it has not fallen on deaf ears with the Leech Lake Tribal Council. We are the elected leaders of our citizens and expect our concerns with a decision that will have long-term effects on our treaty-reserved homeland to be respected and considered in a meaningful way. To that end we respectfully request a meeting to continue the government-to-government consultation regarding the Site and EPA's proposed OU7 ROD while we are in Washington D.C. on the afternoon of October 22nd or anytime October 23rd, 2019. While we apologize for the short notice it is unavoidable as the timeline for the OU7 ROD concludes at the end of October and the Tribe's opportunities to travel to Washington to have our voice heard are limited. Please contact Lianne Endo at lmendo@locklaw.com or (808) 284-7576 who can assist in facilitating a time for this matter to be addressed.

October 11, 2019
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The Tribe appreciates your prompt response to this letter and I look forward to our opportunity to discuss these matters in detail in the near future.

Sincerely,



Faron Jackson Sr., Tribal Chairman
Leech Lake Band of Ojibwe

Encl.

- Petition for Assessment of Release to Cathy Stepp, EPA Region 5 Administrator by Richard Du Bey, Special Environmental Counsel for the Leech Lake Band of Ojibwe, (August 22, 2019)
- Letter from Richard Du Bey, Special Environmental Counsel to the Leech Lake Band of Ojibwe to Tom Turner, Office of Regional Counsel EPA Region 5 (August 9, 2019). Enclosed
- Letter from U.S. Senators Tina Smith and Amy Klobuchar to EPA Region 5 Administrator Cathy Stepp (October 7, 2019)
- Letter from Ben Benoit LLBO Environmental Director to Heriberto Leon, EPA Community Involvement Coordinator Re: Leech Lake Band of Ojibwe's Public Comments on EPA's Proposed Plan for Addressing Dioxin-Contaminated Soil in Residential Areas at Operable Unit 7 of the St. Regis Paper Company Superfund Site (August 15, 2019).

115 Sixth St NW, Cass Lake, MN 56633
Telephone: 218-335-8200 Fax: 218-335-8309

October 11, 2019

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cc:

Amy Klobuchar, US Senate

Tina Smith, US Senate

Representative Pete Stauber

Representative Betty McCollum

Cathy Stepp, US EPA Region 5 Administrator

Doug Ballotti, US EPA Region 5 Director Superfund and Emergency Management Division

Alan Walts, US EPA Region 5 Director Multi-media Programs Office

Benjamin Benoit, Leech Lake Band of Ojibwe Environmental Director



Duluth Office | 525 Lake Avenue South | Suite 400 | Duluth, MN 55802 | 218-723-4660
800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

November 22, 2019

Leslie Patterson
United States Environmental Protection Agency
77 West Jackson Blvd., SR-SJ
Chicago, IL 60604

RE: MPCA Concurrence with the Record of Decision for the Soil Remedy for Operable Unit 7 at the St. Regis Superfund Site, Cass Lake, Minnesota, Project Number SR8

Dear Leslie Patterson:

Thank you for the opportunity to review and provide comments on the Record of Decision (ROD) for the residential properties (OU7) at the St. Regis Paper Company Superfund Site, prepared by U.S. Environmental Protection Agency (EPA). The Minnesota Pollution Control Agency (MPCA) concurs with EPA's preferred cleanup plan for surficial soil at OU7 (Alternative 15B). We have the following comments on the proposed remedial action documented in the ROD:

- MPCA concurs with the proposed remedy because it will meet or exceed risk-based preliminary cleanup goals established for dioxin for residential property for all of OU7, it will achieve the remedial action objective for OU7 by excavating and removing contaminated soil and replacing it with clean soil, and because no institutional controls would be required on the residential properties post-remediation.
- When this remedy is implemented, the potential for recontamination from contaminated surface soil on OU1 properties must be addressed. EPA intends to move forward with planning for future remedial actions for addressing contaminated soil at the other OUs in the near future. Because of the potential for recontamination at OU7 properties after the remedial action is complete, MPCA requests that ongoing sampling will occur until the soil remedial actions at the other OUs are complete.
- MPCA requests the opportunity to provide input on remedial action design soil sampling locations to address any data gaps prior to remedial action implementation. It is our understanding that remedial action design sampling will be conducted on all properties in OU7 that have not been fully characterized yet. Sampling plans for each individual property will need to be tailored to account for any previous wood treating operations or other activities that may have occurred on or near the property that may have affected depth and distribution of contaminated soil. In addition to the contaminants of concern identified in the Proposed Plan, the MPCA expects that soil will be characterized for other potential site contaminants, including PCP, where appropriate for the design and confirmation sampling.

Leslie Patterson
Page 2
November 22, 2019

If you have any questions about the above comments, please feel free to contact me at kathryn.sather@state.mn.us or at 651-757-2691, or the site project manager Erin Endsley at erin.endsley@state.mn.us or at 218-302-6619.

Sincerely,

Kathryn Sather

This document has been electronically signed.

Kathryn Sather
Division Director
Remediation Division

KS/EE:pp

Attachment C

Administrative Record Index

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